

THE CONTENTS OF THIS SECTION ARE
THE HIGHEST QUALITY AVAILABLE

INITIAL mmj0 DATE 4/17/02

Appendix E-1
Supervisor's Daily
Logbook

Supervisor's Daily Logbook

Lockheed Martin Idaho Technologies Company**INTERDEPARTMENTAL COMMUNICATION**

Date: November 5, 1998
To: Ross E. Johnson MS 3650
From: Gail Hantman MS 5105
Subject: Location of Document

I have located the document you requested; i.e., entry in WCF Supervisor's Log Book for 08/25/77, Page 33. The document image is on a microfilm reel located in CPP-1605, Series 400, Reel 4. The original document was sent to the retention center at CFA - located in Box 36978, Space 132 D.

I have enclosed a copy of the page from the microfilm reel and copies of the pages/entries in the document control operations records indexes that identify the microfilm reel and the location of the storage box at the records retention center. A request for retrieval of the original document has been made. Judy Hamilton, of the retention center, informed me this morning that the box has been sent to the federal retention center in Washington. She has requested that it be shipped back to us which will take 8 - 10 days. You will be contacted when we receive the box.

I hope this will help you with your research effort.

Enclosures

Gail Hantman

ORIGINAL COPY

DEPARTMENT OF ENERGY
IDAHO OPERATIONS OFFICE

Receipt No. 4947

RECORDS STORAGE RECEIPT

Page 1 of 1

Branch EXXON NUCLEAR IDAHO COMPANY

Section PRODUCTION SERVICES

Requested Disposition of Material (Check One)

☒ Storage☐ DestructionTo be Completed by Records
Management Personnel

Contents and Dates (Include Necessary Identification for Future Reference)	Official Retention Period	Disposal Authority DOE Order 1324.2	Retention Period Expires	Date of Destruction	Location	
					Box No.	Space
105 1. List Boxes Numerically: WCF Supervisors Log Books (5/13/77 to 6/8/79)	75 Years	C-25-6.c	12-31-2054		36978	132 D
2. WCF Supervisors Log Books (6/8/79 to 3/11/81 shutdown)			12-31-2056		36979	132 C
105 3. WCF & Tank Farm Operation Log Books (9/2/77 to 8/29/81)			"		36980	"
(Has Been Microfilmed)						
LIFETIME RECORD						

I certify that no classified matter
is contained in this shipment

R. E. Sorenson

Section Supervisor

Date 2/24/82

Complete in triplicate and send
Original and first copy with
Shipment to CFA-674-EI certify that the above records were
received by records management

M. L. Bernard

Date 3-11-82

Upon completion, first copy will be returned to

M. L. Bernard

Name

CPP-602 (603776)

Address

Rm. 234

Location

(Replaces ID F-32 which may be used.)

Storage receipt: Mr.

[illegible]

PRODUCTION DEPARTMENT REEL ASSIGNMENTS

SERIES 400

REEL NO.	TITLE	DATE	
		Processed	Received
400-0001	Solid Storage WC-115-2, -3, -4	5/13/80	6/80
0002	Temp. of Solid Storage WC-136-, -2, -3, -4, -5, -6, -7	5/13/80	6/80
0003	Solids Storage III Temp. WC-140-1, -2, -3, -4	5/13/80	6/80
	-5, -6, -7 & Vault Temperatures		
0004	WCF Shift Supervisors Operating Logs 77 to 79	3/4/82	3/5/82
0005	WCF Shift Supervisors Operating Logs 79 to 81	3/3/82	3/5/82
0006	WCF Supervisors & Operation Logs 1974 to 1981	3/3/82	3/5/82
0006 Cont.	WCF Operation Logs 3/8/74 to 5/4/79	7/12/82	7/14/82
007	WCF RUN #9: WC-1 & WC-2	4/15/82	5/20/82
008	WCF RUN #9: WC-3, WC-4, WC-5	4/15/82	5/20/82
009	WCF RUN #9: WC-6, WC-7	4/15/82	5/20/82
010	WCF RUN #9: WC-8, WC-9	4/15/82	5/20/82
011	WCF RUN #9: Data Sheets and WC-9 cont.	4/15/82	5/20/82
012	WCF RUN #9 Data sheets 10/75 to 12/81	4/15/82	5/20/82
013	RUN PLANS #3 to #9 8/14/68 to 3/18/81	7/20/82	8/24/82
400-0001 add on	WC-115 Solid Storage 1982	1/28/83	2/2/83
002 add on	WC-136 Solid Storage 1982	1/28/83	2/2/83
03A add on	WC-140 Solid Storage 1982 (1/80-12/81Prev.)	1/28/83	2/2/83
014	WCF Data Sheets for 1982	1/28/83	2/2/83
400-0006-A	WCF Operator Log Books 1977 to 1982	2/2/83	2/11/83
014 add on	WCF RUN PLAN #H-9 Issued 12/5/80	3/17/83	3/21/83
002 add on	WCF-115-1 Temps. 1983 & WC-136 1983/84	7/25/84	8/23/84
003A add on	WC-140 Solids Storage 2/1/83 to 7/9/84	7/25/84	8/23/84
0014 add on	WCF Shutdown Data, WC-114, WC-119 1983/84	7/25/84	8/23/84
06A Add on	WCF OPERATORS LOG BOOKS	2/28/86	3/5/86

8-25-77

D

1600-2400

CPP OPERATIONS			
HIA		MMH	
		RWM	<i>Down</i>
PDS	<i>12</i>	FLM	
LWS	<i>18</i>	WAM	<i>Down</i>
		ECN	
RSC		GFO	
LEC		GKO	
HDD	<i>21</i>	MJP	<i>1</i>
		KER	
SFF		JMS	<i>11</i>
		RDT	
BH		LDW	
JLL		LOZ	
JKL	<i>JKL</i>		

5 SHIFT (3) HELPERS

1. Pumped WL-10 and turn on steam
2. Operated WL-10, locate leaks in change. *turn CPP-655 & CPP-636.*
3. completed pressure steam line in ②
4. calixer is C. *(boiler house secure)*
5. 603 shipped *(drawing). The water*

*is to the calixer to
area. - H.P. office & corridor.
create track.*

*and @ CPP-604, 605,
9, 619 & CPP-628.*

*waiting for H.P. to
H.P. ropes can be
the calixer. -
properly all shift.*

Occurrence Report

OUR 86-0034

10/22/86

ENVIRONMENTAL COMPLIANCE

Correspondence Control Form

Correspondence Description:

Transfer of File No Units - Tank Farm
Release Near Valve Box A-2 - CPP-79

Correspondence Source/Originator:

Brenda Cole

Correspondence Date: June 11, 1991

☐ Incoming
 ☐ Significant Outgoing
 ☐ Other Outgoing (Check One)

If significant outgoing, fill out the reverse side before distribution or route.

EC Department Distribution & Route:	Route	Copy	Action	Specific Comment
Earle, O. K., Mgr Env Restoration & Assessments				
Franz, G. R., Mgr Env Permitting & Regulations				
Linhart, J. G., Mgr Env Assessments & Administration				
Stuart, L. R., Mgr Environmental Assurance				
Umek, A. M., Department Manager				
Pointer, T. F., Special Assignment				
Dee Williamson		X		copy of EC Correspondence Control Form only

Other Distribution & Route:

Route Copy Action

ER Section File		X		B. Holden please start new file CPP-79

Environmental Records Center (ERC)	Copy	File Code	Specific Comment
	X		CPP-79

Action:

Requires Action Item Tracking: ☐ Yes ☐ No
 Requires Revision of Action Item: ☐ Yes ☐ No
 Closes Out Action Item: ☐ Yes ☐ No

Description/Item Number (if applicable):

If new or revised action item, specify Due Date:

Copy	Track Sys Type*	Specific Comment

Archibald, J. K., Action Tracking Coordinator

* Identify tracking system type: ECM = Mgr EC only EPR = Env Perm/Reg only ELA = Env Impact Assessments only EAD = Env Administration only
 EA = Env Assurance only ERI = Env Rest/Int only DEPT = Department Wide

General Comments:

31

Brenda L Cole June 11, 1991

Signature of Form Originator

Date

ENVIRONMENTAL COMPLIANCE

Correspondence Control Form

Does this correspondence/information close out an action item: ☐ Yes ☐ No

(If so, in Action Section on front of form, check "yes" in appropriate box, check the Action Tracking Coordinator Copy box and note appropriate information in the "Description/Item Number" box as to which item the document closes out.)

Does this correspondence/information require verification: ☐ Yes ☐ No

If so, obtain verification from EC Quality Assurance (EC QA) and attach the Attachment 3 sheet.

Originator: _____ Date: _____

Does this correspondence/information assign or create an Action item: ☐ Yes ☐ No

If "yes," Action Item Tracking must be initiated on the reverse side of this form.

Identify the signature level for this correspondence/information: _____

Approvals Obtained:

<u>Name</u>	<u>Signature</u>	<u>Comment/Remarks</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
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_____	_____	_____
_____	_____	_____

Signature Authority Approval to release document:

Signature _____

Date _____



UNUSUAL OCCURRENCE REPORT

1. Report Number: **W I N — 8 6 — 0 0 3 4 — C P P**
2. ☒ Initial Issue Date: October 22, 1986
- ☐ Interim Issue Date: _____
- ☐ Final Issue Date: _____
3. Department: _____ Critique Report Reference No.: _____
4. Facility, System, or Equipment: Production
- NWCF, WCF, PEW Tank Farm
5. Date of Occurrence: July 7, 1986
6. Time of Occurrence: 0230
7. Occurrence Subject: Inadvertent Transfer Resulting in Loss of Waste Solution
8. Apparent Cause Categories:
- ☒ Design ☐ Material ☒ Personnel ☐ Procedure ☐ System ☐ Equipment ☐ Process
- ☐ Other: _____

9. Description of Occurrence:

On July 7, 1986 at 0230, "B" crew attempted to transfer WC-119 (WCF sump tank) to WL-102 (PEW feed tank). The transfer was started. The operator at CPP-604 (PEW) notified the operator at CPP-633 (WCF) that nothing showed up in WL-102. The transfer was stopped after approximately 1,000 gallons of waste solution were transferred. A rise in the WL-101/102 vault sump was then observed. The vault sump was jetted to WL-102 with a net increase in WL-102 of 900 gallons. *No analyzed but acidic < 2 pH*

The shift supervisor suspected a problem with LR-WL-102 (level recorder). Maintenance personnel were requested to check the level instrumentation for WL-102. Nothing significant was found.

The shift supervisor assumed that the 900 gallons (+ or - 50 gallons) jetted from the WL-101/102 vault sump were in fact part of the missing 1,000 gallons just transferred. However, the WL-101/102 vault sump level was at 14% before the transfer and 15% after the transfer. Thus, approximately 200 to 250 gallons of the 900 gallons jetted from the sump to WL-102 can be attributed to the WC-119 to WL-102 transfer.

Believing all the transfer solution was accounted for, the shift supervisor requested that the transfer be completed. The transfer was started again at 0440. Again, the level in WL-102 did not rise, indicating that the transfer was not received in WL-102. The level in the WL-101/102 vault sump increased 14.5% or approximately 600 gallons; this led the shift supervisor to believe that the transfer was being routed via the WL-101/102 vault sump. During the second phase of the transfer, 1,550 gallons (+ or - 50 gallons) were transferred. The vault sump received 600 gallons (+ or - 50 gallons) which were transferred to WL-102.

UNUSUAL OCCURRENCE REPORT

Report Number:

W I N — 8 6 — 0 0 3 4 — C P P

10. Operating Conditions at Time of Occurrence:

NWCF shut down for maintenance, PEW evaporator was in operation, and WCF-114 evaporator was in operation.

11. Immediate Evaluation:

Following the August 2 transfer, several theories existed concerning the location of the missing waste solution. One such theory was that the waste solution was in WL-132 (sludge removal tank for WL-133). The level instrumentation for WL-132 only measures the upper 10% of the vessel. This fact left uncertainty concerning the actual volume in the tank. Therefore, WL-132 was filled with water until the level recorder indicated a level. The next step was to recreate the transfer of July 7 using treated water in order to determine if the missing liquid leaked into WL-132. A test manifold was installed on the decon line to 3"PUA-10111 in valve box D-4. Treated water was connected to the test manifold and all valves on the transfer line were closed. The water was turned on; observers were placed at valve boxes D-4, C-8, C-12, and C-37. The level instrumentation for vessels WL-133, WL-132, WL-102 and the WL-101/102 vault sump were monitored for a level increase. No increase in WL-132 was observed; however, approximately 15 minutes after the

(Continued on Pages 5, 6 and 7)

12. Immediate Corrective Action Taken, and Results:

The transfers were terminated when it became apparent that the transfers were not being received in WL-102.

13. Further Evaluation Requirements:

- ☐ Further evaluation is required before continued operations are permitted.
See Item 15 for evaluation assignments.
- ☒ Operations may continue but further evaluation is necessary.
See Item 15 for evaluation assignments.
- ☐ Further evaluation is not required for the complete assignment of corrective actions.

UNUSUAL OCCURENCE REPORT

Report Number:

WIN — 36 — 0034 — CPP

14. Final Evaluation and Lessons Learned:

☒ To be reported in the Final Report.

15. Permanent Corrective Action:

☒ Taken ☒ Recommended ☐ To be supplied ☐ Scheduled☐ Above action subtitles listed with each corrective action item when more than one used.Taken

- (1) The operating procedures were changed to indicate that either PLV-WL-187 or PLV-WL-188 must remain open at all times.

Recommended

- (2) Lock PLV-WL-188 in the open position.

Action: B. R. Dickey

Due: November 7, 1986

- (3) Investigate the feasibility of installing a valve on the drain line (1"PUA-205) from valve box A-2 and report the results to Facility Support.

Action: G. F. Offutt

Due: December 1, 1986

- (4) Investigate methods of sealing the encasements exiting valve box A-2 for 3"PUA-203 and 3"PUA-1013 and report the findings to Facility Support.

Action: G. F. Offutt

Due: December 1, 1986

(Continued on Page 8)

UNUSUAL OCCURRENCE REPORT

Report Number:

WIN — 36 — 0034 — C P P

16. Programmatic Impact:

☐ None ☐ As stated

17. Impact on Codes and Standards:

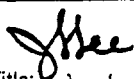
None

18. Similar Unusual Occurrence Report Numbers:

850006

19. Signatures:

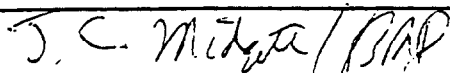
Signature:



Date: 10/20/86

Originator Name & Title: J. L. Lee, Manager, Facility Support

Signature:



Date: 10/20/86

Name & Title:

J. C. Midgett, Assistant Plant Operations Manager

Signature:

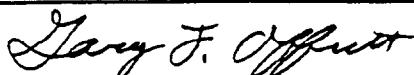


Date: 10/20/86

Name & Title:

M. J. Green, Manager, Administrative Control

Signature:



Date: 10-21-86

Name & Title:

G. F. Offutt, Manager, Systems Engineering

Signature:



Date: 10-21-86

Name & Title:

A. J. Matule, Manager, Environmental Engineering

Signature: 

Date: 10/22/86

Name & Title:

W. C. Moffitt, Vice President and Manager, Production

Signature: 

Date: 10/22/86

Name & Title:

E. J. Volpe, Vice President and Manager, N&IS

OTHER: Use a UOR Continuation Page for additional data and signatures (Form WINCO-5690A)



UNUSUAL OCCURRENCE REPORT

(Continuation Page)

000000

Report Number:

W I N — 8 6 — 0 0 3 4 — C P P

9. Description of Occurrence: (Continued)

Approximately 820 gallons of the 2,650 gallons (+ or - 100 gallons) transferred can be accounted for in WL-102, leaving 1,830 gallons (+ or - 50 gallons) still missing. The appropriate data sheets and instrument strip charts for this transfer are included in Appendix-A.

Following the transfer on July 7, Waste Processing Facility Support began investigating the peculiar circumstances surrounding the transfer. In the Plan-of-the-Day (POD), a request was made to have the WL-101/102 vault sump empty before any transfers from the WCF or NWCF to WL-102. Also, the transfer route passes through valve boxes D-4, C-8, C-12, and C-37 (see Appendix-8). Therefore, a request was made that valve boxes C-37, C-12, C-8, and D-4 be observed for leaks during transfers. Several transfers were made in the days following July 7, all utilized the same transfer route and all were without incident.

On August 2 at 1030, "A" crew attempted to transfer NCD-123 (NWCF decon area sump tank) to WL-102. The transfer was started and then stopped when no increase in WL-102 was observed. Approximately 1,289 gallons (+ or - 50 gallons) of waste solution were transferred before the transfer was terminated. The WL-101/102 vault sump increased 11% or approximately 100 gallons. This was jetted to WL-102. The shift supervisor requested that the transfer route valve arrangement be verified. Valve PLV-WL-188 was found to be partially open. The valve was opened completely and the transfer was restarted.

Analysed - Acidic Contact
Harvard Forsyth
6-3644

The records indicate that once PLV-WL-188 was fully open, waste solution must have drained from the transfer line into WL-102. As a result, 550 gallons (+ or - 50 gallons) of the 1289 gallons (+ or - 50 gallons) transferred during the first phase of the transfer can be accounted for in WL-102. During the second phase of the transfer, 1,620 gallons (+ or - 50 gallons) were transferred, and 1,676 gallons (+ or - 50 gallons) were received in WL-102. A total of 682 gallons (+ or - 50 gallons) are still missing as a result of this transfer. The appropriate data sheets and instrument strip charts for this transfer are included in Appendix-C.

The volume of waste solution missing, as a result of the two transfers, is 2,512 gallons (+ or - 100 gallons).

11. Immediate Evaluation: (Continued)

test started, an operator heard water running in valve box A-2. The water was shut off to the manifold at valve box D-4, and the water stopped running in valve box A-2 within minutes.



UNUSUAL OCCURRENCE REPORT

(Continuation Page)

Report Number:

W I N — 8 6 — 0 0 3 4 — C P P

An investigation of the current tank farm piping prints showed no connection between valve box A-2 and the transfer line from NWCF/WCF to WL-102. However, an investigation of the original 1954 construction prints for A-2 indicated that its drain line along with valve boxes A3A, A3B, and A3C were tied into the transfer line from CPP-738. This transfer line was originally installed to allow the water used for cooling WM-180 to be transferred to WL-102. When A-2 was installed, its drain line was tied into this existing transfer line to WL-102.

A test was run to verify that the drain line from A-2 is actually as shown on the construction prints and not as shown on the current tank farm prints. With PLV-WL-188 open, a garden hose was placed in valve box A-2. The level instrumentation indicated an increase in WL-102, which verified that valve box A-2 does drain to WL-102 through 3"PUA-10111.

If PLV-WL-188 is closed during a transfer, the transferred solution must back up into valve box A-2 through its drain line. Valve box A-2 has four clay tile encased transfer lines which could allow water to exit the valve box. Two line encasements would allow water to enter valve box A-7, one line encasement would allow water to enter WM-181 vault sump and another line encasement would allow water to enter the WL-101/102 vault. Because a significant volume of the water from the transfers on July 7 and August 2 did not show up in the WL-101/102 vault sump, a hypothesis was drawn that the missing water may have been in the WM-181 vault sump. The sump level instrumentation did not indicate a level but this particular sump level instrument had not indicated a level for several years. This left some uncertainty concerning the reliability of this instrument. Therefore, a few hundred gallons of water were placed in the sump. The vault sump was jettted to WM-180.

Approximately 300 gallons were transferred. This was the volume indicated on the vault sump level instrumentation prior to the transfer.

If the missing waste solution did not go to the WL-101/102 vault sump, and if the missing waste solution did not go to the WM-181 vault, then the final possibility for the missing waste solution that entered valve box A-2 is that it went to valve box A-7 which drains to the WM-184 vault. To test this theory, PLV-WL-188 was closed and a garden hose was placed in valve box A-2. Water was run for 30 minutes. When the water level in valve box A-2 stabilized, valve box A-7 was inspected for inleakage of water. No water was discovered.

In order to determine the exact exit route the water was taking out of valve box A-2, a visual inspection of the interior of the valve box was necessary. Therefore, water was once again placed into 3"PUA-10111 through the test manifold in valve box D-4. With all of the valves on



UNUSUAL OCCURRENCE REPORT (Continuation Page)

Report Number:

W I N — 8 6 — 0 0 3 4 — C P P

the transfer line closed, a visual inspection was made of the interior of A-2 while water was entering the valve box through the drain line. The visual inspection indicated that the water was exiting the valve box through the encasement for 3"PUA-203 (to WM-181) and 3"PUA-1013 (to WL-101). The water ran for 90 minutes (600 gallons). No level increase was observed in the WL-101/102 vault sump or in the WM-181 vault sump.

The final test performed was an attempt to determine if solution would go to the WM-181 vault through the encasement for 3"PUA-203 (to WM-181). A garden hose was placed in the encasement for 3"PUA-203. The water was run for 30 minutes. No level increase was observed in the WM-181 sump. However, the WL-101/102 vault sump increased from 0 to 9% (50 gallons).

Further investigation of the 1951 construction prints revealed that 3"PUA-203 and 3"PUA-1013 both pass through a common junction box. This junction box allows the encasements for the two lines to make a 90 degree turn. In other words, both encasements drain from A-2 to this junction box. The prints also indicate that the transfer line to WM-181 is sloped to this junction box. The transfer line to WL-101 is sloped to the WL-101/102 vault. Therefore, all liquid in these two encasements should drain to the WL-101/102 vault. This explains why no solution entered the WM-181 vault.

In summary, conclusions drawn from the tests are listed below.

1. The drain line for valve box A-2 is tied directly into 3"PUA-10111 (NWCF/WCF to WL-102 transfer line).
2. Waste solution will back up into valve box A-2 through its drain line if PLV-WL-187 (to WL-132) and PLV-WL-188 (to WL-102) are closed during a transfer from the NWCF or WCF to WL-102.
3. The solution that enters valve box A-2 exits through two encasements to a common junction box that drains to the WL-101/102 vault.
4. The common junction box will hold approximately 10 gallons. All other solution should drain to WL-101/102.
5. The unaccounted for waste solution is not in WL-132/WL-133 (new sludge removal tank and feed tank for the PEW evaporators).
6. The unaccounted for solution is not in the WM-181 vault.
7. The unaccounted for solution is not in the WM-184 vault.



UNUSUAL OCCURRENCE REPORT
(Continuation Page)

Report Number:

W I N — 8 6 — 0 0 3 4 — C P P

8. An acceptable location for the missing liquid has not been identified.
 9. 2512 gallons (+ or - 100 gallons) are missing from the two transfers and has most likely escaped to the soil through the broken clay tile encasement for 3"PUA-203 and 3"PUA-1013.
15. Permanent Corrective Action Recommended: (Continued)
- (5) Remove 3"PUA-1013 from service by taking the following action.
 - a. Close, lock and tag valves HSV-WLO-25, PUV-WM-17 and PUV-WM-18.

Action: B. R. Dickey Due: December 1, 1986
 - b. Change the operating procedures to reflect that 3"PUA-1013 has been removed from service.

Action: M. J. Green Due: December 1, 1986
 - (6) Core drill and soil sample around 3"PUA-203 and 3"PUA-1013 to characterize the soil around potential pipe encasement leakage points.

Action: A. J. Matule Due: January 5, 1988

JULY 7, 1986

Transfer from WC-119 to WL-102

SENDING VESSEL (WC-119) WCF

Phase-1

	Beginning	Ending	Volume
LR-WC-119	61%	46%	1000 gallons
LR-WL-102	40%	43%	650 **
LR-WL101/102	14%	15%	200
TOTAL RECEIVED			200

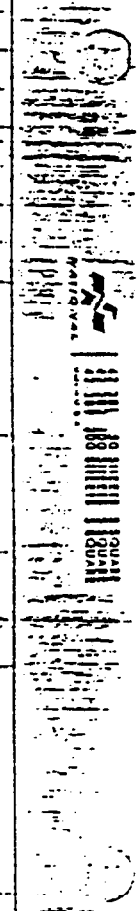
Phase-2

LR-WC-119	48%	24%	1550
LR-WL-102	43%	45.5%	600 **
LR-WL-101/102	2%	14.5%	600
TOTAL RECEIVED			600

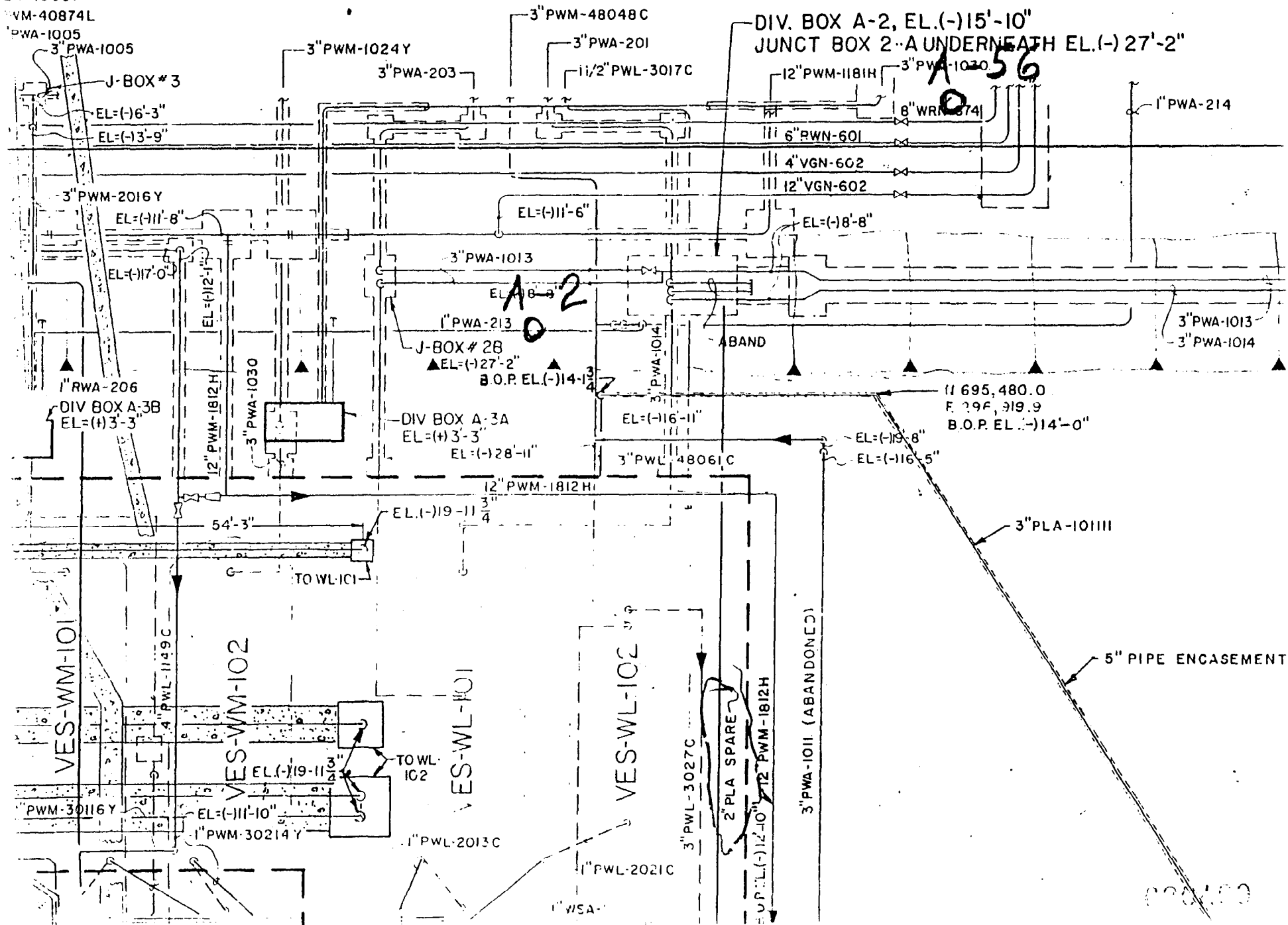
TOTAL TRANSFERRED FROM WC-119	2650
TOTAL RECEIVED IN WL-102	800
TOTAL MISSING FROM TRANSFER	1850

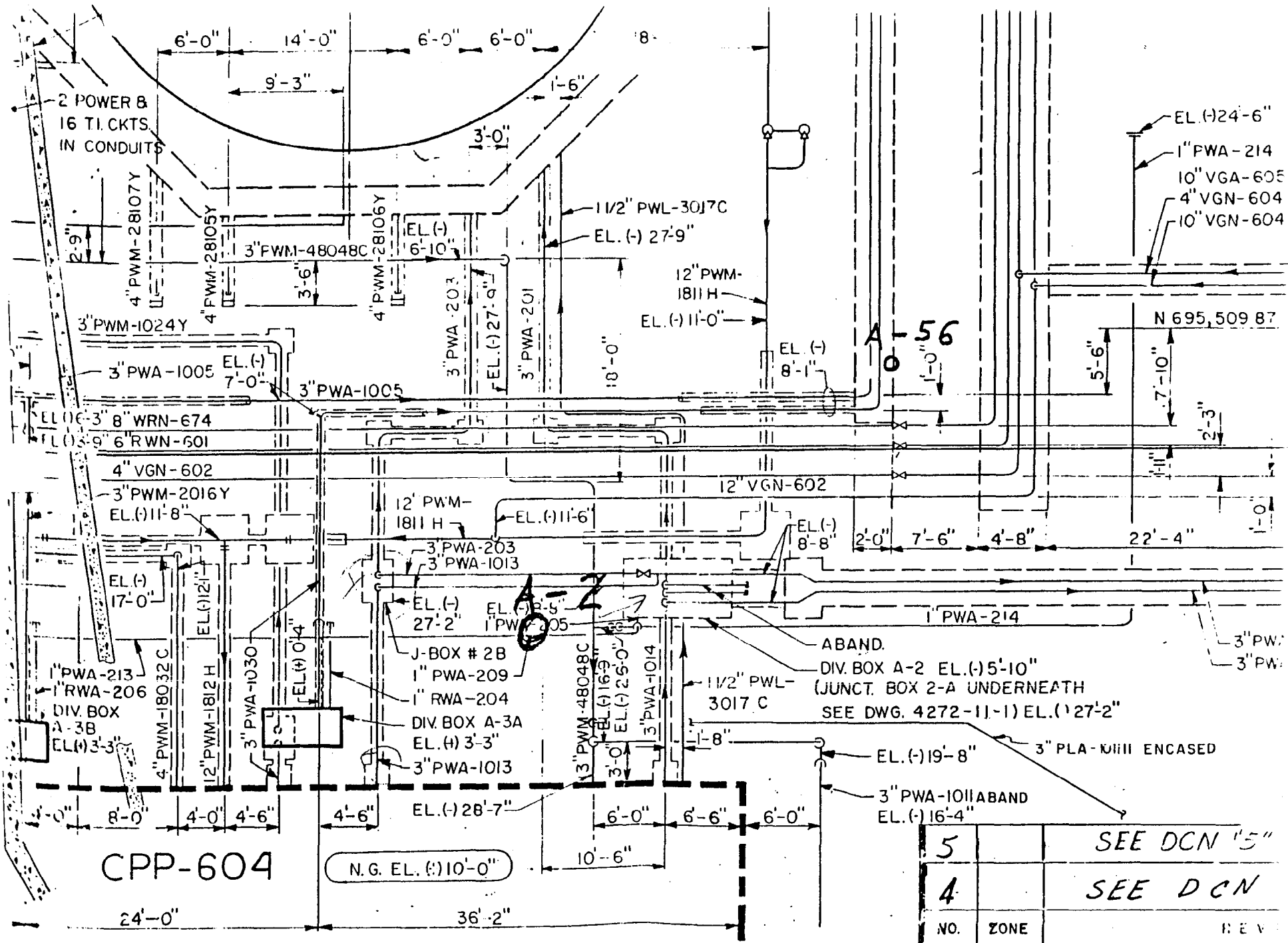
** The increase in WL-102 was a result of jetting the WL-101/102 vault sump.





LA-4305P
WM-40874L
PWA-1005





5		SEE DCN "5"
4		SEE DCN
NO.	ZONE	REV

E

↑

F

G

070100

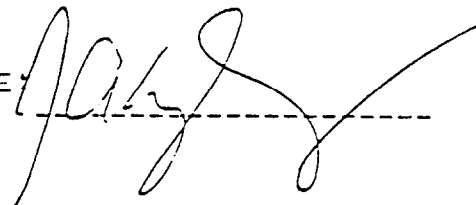
August 2, 1986

FINAL report for NCD-123

REPORT FOR : GF JOHNSON
ADDRESS : CPP-624
DATE RECEIVED : 08/01/86
TIME RECEIVED : 22:54
GWA CHARGED : 10250-244-100
MSA MB/HR : <1

LAB NUMBER : 080110
PHONE NUMBER : 6-3007
DATE COMPLETED: 08/03/86
TIME COMPLETED: 04:34
REVIEWED BY : J.A. MURPHY

SIGNATURE



HAZARD INDEX: >1E4

ANALYSIS	METHOD	SAMPLE	ANALYST	RESULTS FOR 080118
SP-GR	77981	NCD-123	MGL	1.0098E+00+-5.54E-04 @ 25/4
ACID	87015	NCD-123	JSL	< 1.3920E-01 NACID
FLUORIDE	67093	NCD-123	JLK	< 2.6123E+01 UG/ML
CHLORIDE	67171	NCD-123	JLK	< 3.7298E+01 UG/ML
GROSS BETA	17970	NCD-123	JSL	9.6021E+03+-9.49E+02 B/MIN/ML
URANIUM	67920	NCD-123	LDG	8.4191E-05+-1.06E-05 G/L
UD-SLDS	7976	NCD-123	HCH	195 UG/ML
SULFATE	7001	NCD-123	LMS	4.1903E+01 UG/ML

FINAL report for WC-119

0000

Report for
Address: MCF
: CFP-663Log number : 092017
Phone number : 6-3697Date received : 09/20/86
Time received : 14:21Date completed: 09/26/86
Time completed: 19:26

GMA charged : 13820-450-100

Reviewed by : R.L. DEMMER

MSA MR/hr : 2

Signature: _____


HAZARD INDEX: >1E7

<u>ANALYSIS</u>	<u>SAMPLE</u>	<u>METHOD</u>	<u>ANALYST</u>	<u>RESULTS for 092017</u>
FLUORIDE	WC-119	67093	JSL	< 2.6123E+01 UG/ML
I-129	WC-119	3533	KPH	< 2.3961E+00 D/sec/ml
PH	WC-119	87017	JSL	5.7587E-01+-3.99E-02 PH
SP-CR	WC-119	77981	JSL	1.0097E+00+-1.55E-04 @ 25/4
TRITIUM	WC-119	3011	KPH	7.0453E+02+-2.26E+01 D/SEC/ML

July 7, 1986

FINAL report for WC-119

REPORT FOR : WCF
ADDRESS : CFF-663
LOG NUMBER : 092017
PHONE NUMBER : 6-3697
DATE RECEIVED : 09/20/86
TIME RECEIVED : 14:21
DATE COMPLETED: 09/26/86
TIME COMPLETED: 19:26
GWA CHARGED : 13820-450-100
REVIEWED BY : R.L. DEMMER
MSA MR/HR : 2

SIGNATURE: 

HAZARD INDEX: 0.1E7

ANALYSIS	METHOD	SAMPLE	ANALYST	RESULTS FOR 092017
	87017	WC-119	JSL	5.7587E-01+-3.99E-02 PH
ORIDE	67093	WC-119	JSL	2.6123E+01 UG/ML
GR	77981	WC-119	JSL	1.0097E+00+-1.55E-04 @ 25/4
29	3533	WC-119	KPH	2.3961E+00 D/sec/ml
TIUM	3011	WC-119	KPH	7.0453E+02+-2.26E+01 D/SEC/ML



ational Engineering Laboratory

AJM-48-87

From : A. J. Matule
Phone : 6-0115/CPP-630
Date : October 9, 1987
Subject: Corrective Action UOR 86-0034 #15(6)

To : L. C. Mitchell
Data Reliability

cc: J. L. Lyle, DOE-ID
W. C. Mallory
G. K. Oswald

T. F. Pointer
D. J. Poland
F. S. Ward

On September 28, 1987, DOE-ID (J. L. Lyle), Production, (G. K. Oswald) and N&IS (W. C. Mallory, A. J. Matule, and D. J. Poland) met to discuss the corrective action for UOR 86-0034 #15(6). It was concluded that the work required for the corrective action is the same as work required by the INEL Consent Order and Compliance Agreement (CO&CA) Action Plan for RCRA/CERCLA solid waste management units. We request that the corrective action for the UOR 86-0034 #15(6) be deleted since this work will be done in accordance with the CO&CA at a schedule to be determined by EPA.

If you have any questions, please call me.

A. J. Matule, Manager
R&ES Environmental Engineering

DJP/tlr



AUGUST 2, 1986

Transfer from NCD-123 to WL-102

SENDING VESSEL (NCD-123)

Phase-1 -----	Beginning	Ending	Volume
LR-NCD-123	73%	46%	1289 gallons
LR-WL-102	58%	56%	550 **
LR-WL101/102	0%	11%	100
TOTAL RECEIVED			550

Phase-2 -----			
LR-NCD-123	46%	17%	1620
LR-WL-102	56%	63%	1676 **
LR-WL-101/102	0%	0%	0
TOTAL RECEIVED			1676

TOTAL TRANSFERRED FROM NCD-123	2908
TOTAL RECEIVED IN WL-102	2226
TOTAL MISSING FROM TRANSFER	682

** The PEW evaporator was operating at the time of the transfer.

Table 1.1

Composition of ICPP High-Level Liquid Wastes

<u>Ionic Component</u>	<u>Composition, Molarity</u>		
	<u>Aluminum Nitrate</u>	<u>Sodium Bearing</u>	<u>Fluorinel^a</u>
Zr	---	---	0.43
Al	1.5-1.9	0.4-0.8	0.18 - 0.34
F	---	0.003-0.04	3.0 - 3.3
Cd	---	---	0.13 - 0.14
B	0.02	0.008-0.05	0.22 - 0.24
Fe	0.006	0.01-0.02	0.001
Cr	---	---	0.002
H	0.8-1.2	0.4-1.8	1.8 - 1.9
NO ₃	5.4-7.7	3.7-4.8	2.1 - 2.3
SO ₄	---	0.04-0.07	0.08
Na	0.1	1.1-2.3	---
K	---	0.2	---
Ca	---	0.006-0.06	---
Mn	---	0.02	---
Cl	---	0.02-0.05	---
PO ₄	---	0.005-0.03	---
Pb	---	0.003	---
Hg	0.001	---	---
Fission Products and Actinides	<0.1	<0.1	<0.1

^a Projected, based on proposed flowsheet.

(Cont'd. from page 1)

exempted incinerated household and commercial wastes from RCRA's hazardous waste regulations, it requires that ash from such wastes be tested to determine treatment, according to Richard Dennison, an EDF scientist.

Robin Woods, an agency press spokesperson had a somewhat different interpretation of the codification rule than EDF did. Woods said current policy required commercial waste ash to be treated as hazardous if tests show that it is toxic. She said, however, that RCRA did not mandate testing.

Woods told BNA that some of the pressure to reconsider current policy came from state and municipal authorities who were confused by the present policy and wanted clarification. The U.S. Conference of Mayors confirmed Woods' assertion. David Gatton, director of policy for the conference told BNA Dec. 2 that commercial ash should be treated as a special waste and regulated somewhat more stringently than solid waste, but less stringently than hazardous waste. □

Citizen Suits

Present Tense, Please

Can citizen suits under environmental laws stand up in court only when the alleged violation continues into the present?

That restriction—that the violation must be ongoing—applies at least to the Clean Water Act, according to a Dec. 1 U.S. Supreme Court decision, which reasoned that the language under the CWA citizen suit provision written in the present tense represents congressional intent and is, therefore, inapplicable to violations that are completed past actions. (*Gwaltney of Smithfield Ltd. v. Chesapeake Bay Foundation Inc.*, USSupCt, No. 86-473).

Enforcement Actions

A Texas Indictment

A federal grand jury in Texas returned a six-count indictment charging three former federal prison employees with conspiracy, hazardous waste disposal without a permit, mail fraud, transporting hazardous waste without a manifest, hauling the waste to an unpermitted facility, and making a false claim. Each faces a maximum 27-year prison term and \$500,000 if convicted (*U.S. v. Kruse*, DC WTexas, No. A-87-CR-115).

The three individuals were formerly employed by Unicor Inc., a government-owned prison factory managed by the Bureau of Prisons. The factory, located at the federal prison in Bastrop, Texas, makes U.S. Army helmets. The three indicted persons are Robert Kruse, Lee Bradley, and Carol Kay Kisamore.

The three allegedly arranged a \$12,000 payment of government funds to Kruse through a fictitious company. Kruse then allegedly had 60 drums of hazardous solvents, used in making the helmets, dumped on his own property. The solvents included methyl ethyl ketone, methylene chloride, toluene, acetone, and 1,1,1-trichloroethane. The prison's warden later fired the employees for their role in attempting to defraud the government.

The Bureau of Prisons paid the Texas Water Commission \$300,000 to clean up the contaminated area.

The citizen suit language in the water act requires citizens "to make a good faith allegation of continuous or intermittent violation." the Court said in its unanimous decision.

The Supreme Court decision overturned a federal appeals court ruling in the *Gwaltney* case, which held that placing limits on the timing of citizen suits would cancel a significant deterrent to violations.

The question now being asked by EPA's legal staff is how that decision affects citizen suit provisions under

The Forgotten Spill

Mobil Chemical Corp.'s Holyoke, Mass., plant had a chemical spill in March 1985 and notified state authorities in August 1986—523 days after the fact. For this act of forgetfulness, the state slapped the company with a \$67,000 fine: \$15,000 for failure to notify immediately and \$100 for each day that it failed to notify thereafter.

The state Department of Environmental Quality Engineering charged Mobil with violating the Massachusetts Oil and Hazardous Waste Prevention and Response Act.

The DEQ said Mobil dumped 11,000 pounds of ethyl benzene and styrene into a dirt-bottomed holding basin and left it there for more than three months. The company finally removed the material in late 1985.

In addition to the fine, a Nov. 25 agreement lodged in state court requires Mobil to hire an independent consultant to determine if further cleanup is necessary, Greg J. Wilson, an assistant state attorney general, told BNA.

A company spokesman told BNA Dec. 9 the spill occurred when polystyrene was accidentally dropped into the basin. He said the company did not report the accident because the material was in a semi-solid state that was unlikely to leach into the soil. The company decided to forego the expense of protracted litigation in favor of the consent judgment, the spokesman added. □

other environmental laws, particularly TSCA. A federal district court in Illinois quashed a TSCA citizen suit last July because the plaintiff was unable to show that the defendant's violation was ongoing.

TSCA's citizen suit language is similar to that of the CWA, according to Terrell Hunt, director of EPA's Office of Enforcement Policy, who told BNA that the agency is studying citizen suit language in environmental laws to determine the impact of the Supreme Court decision. □

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NEW WASTE IDENTIFICATION FORM

CONTRACTOR/FACILITY: ICPP
 CONTACT PERSON: Gerald Sehlke
 REVIEWER: _____

DATE: 10/22/89
 TELEPHONE: 6-3008

List all wastes associated with new units identified as a result of this survey that are not already on the COCA list or on the RCRA Part A Permit. Identify the type of waste/constituent/substance if known; the quantity by either weight or volume; and the disposal dates. In the comments section describe the reasons the waste was not disposed of prior to the survey.

WASTE DESCRIPTION	QUANTITY	DISPOSAL DATES	COMMENTS
High-level mixed waste (characteristic and possibly listed wastes) leak from tank farm valve box A-6	approx. 2500 gal (\pm 100 gal)	July 1986	Inadvertently left off COCA reprioritization.

CHZ


AJM-58-89
 11-16-89

SOIL SAMPLING TANK FARM AREA

UOR 86-0034

Date of Occurrence-July 7, 1986

Options for soil sampling in the Tank Farm west of valve box A-2.

- 1 No action, wait for the RCRA/CERCLA characterization.
Not acceptable because break in line needs to be determined as soon as possible. RCRA/CERCLA characterization could take 2-3 years.
- 2 Use a power auger to collect soil samples in the four junction areas of the line.
Not acceptable because some of the tank farm lines in the junction areas are 1-3 feet apart and the exact locations of the lines are not always known. A driller needs at least 6 feet between lines and the exact locations of the lines when using a power auger.
- 3 Use a hand auger to collect soil samples in the four junction areas of the line.
Not acceptable because of the gravel content in our soil. A hand auger only penetrates about 2-3 feet into CPF soils.
- 4 Use a hand shovel to excavate soil in the four junction areas of the line and then collect soil samples.
- 5  Use a hand shovel to excavate soil to a depth of approximately 8-10 feet (line would still have soil cover) in the four junction areas of the line and then with a hand auger collect soil samples.



SOIL SAMPLING TANK FARM AREA

UOR 86-0034

Date of Occurrence-July 7, 1986

Scope of work
Discussed before
155

Options for soil sampling in the Tank Farm west of valve box A-2.

- 1 No action, wait for the RCRA/CERCLA characterization.
Not acceptable because break in line needs to be determined as soon as possible. RCRA/CERCLA characterization could take 2-3 years.
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Not acceptable because some of the tank farm lines in the junction areas are 1-3 feet apart and the exact locations of the lines are not always known. A driller needs at least 6 feet between lines and the exact locations of the lines when using a power auger.
- 3 Use a hand auger to collect soil samples in the four junction areas of the line.
Not acceptable because of the gravel content in our soil. A hand auger ~~will~~ only ~~be~~ penetrate about 2-3 feet into CPP soils. ~~can~~
- 4 Use a hand shovel to excavate soil in the four junction areas of the line and then collect soil samples.
Because of the depth of the lines (approximately 10 feet) this option would require shoring the excavation, and the exposure to workers would be high. *or an open excavation*
- 5 Use a hand shovel to excavate soil to a depth of approximately 6-7 feet (line would still have soil cover) in the four junction areas of the line and then with a hand auger collect soil samples.
Soil cover would decrease exposure to workers and is the acceptable option.

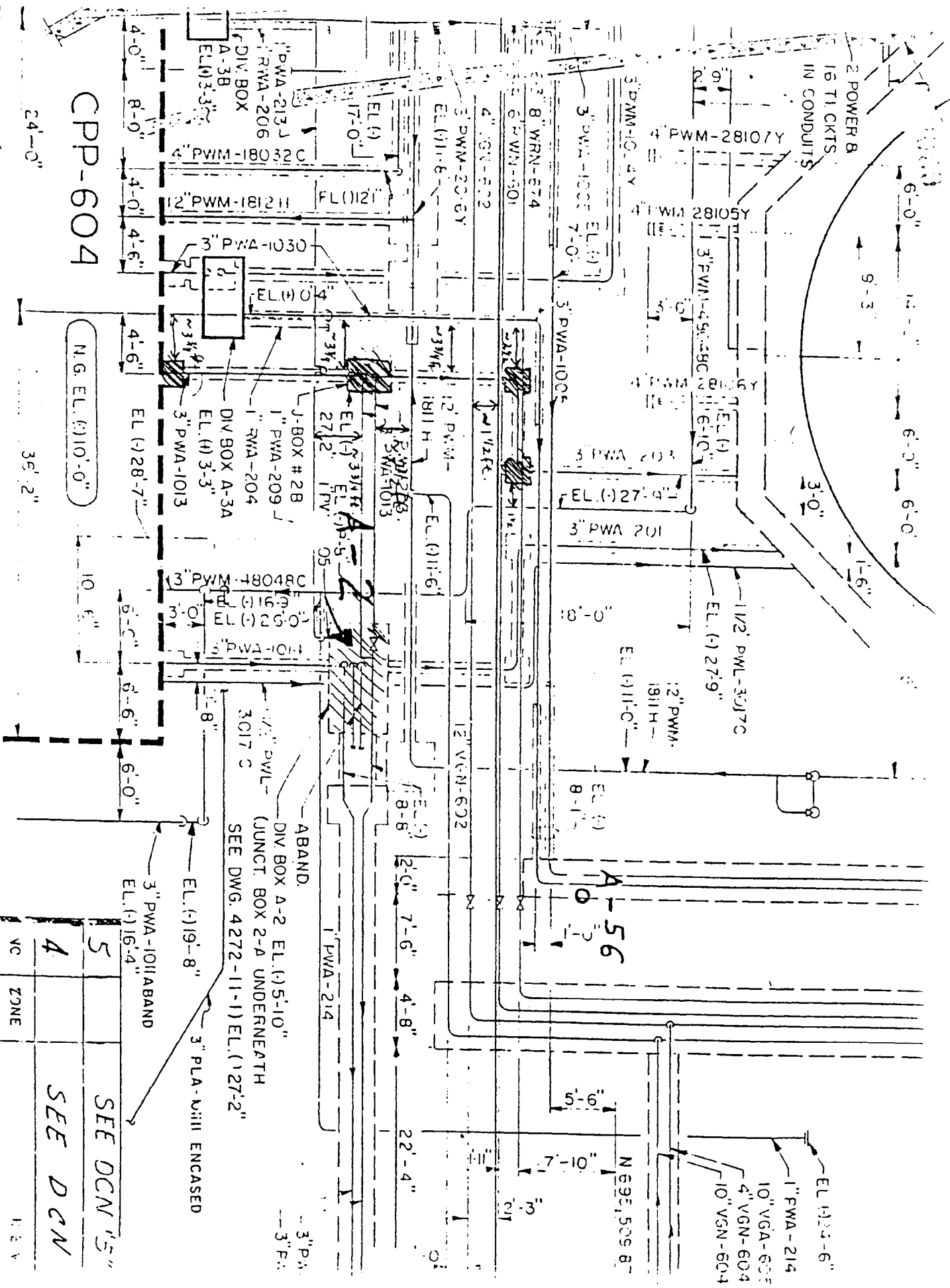
work
rip!!

work
help, help!!

Requirements of
1.5:1 slope

in excess of
Excavated opening approx 18ft. wide.
replace plies

Plan → Area to excavate
Radiation Worker Training
Hand digging



CPP-604

N.G. EL. (+) 10'-0"

5	SEE DCN "5"
4	SEE DCN
VC	ZONE
	11-2-V

E

F

G

STATEMENT OF WORK
TANK FARM (UOR-86-0034)

1.0 Purpose

This Statement of Work (SOW) identifies required subcontractor support at the Idaho Chemical Processing Plant (ICPP) in the preliminary investigation of the Tank Farm spill of July/August 1986 (UOR-86-0034). This SOW outlines the scope of activities to be performed by a subcontractor. Activity constraints in this SOW and the attached WINCO Hazardous and Radioactive Mixed Waste Sampling Subcontract Special Conditions are also included but may not be all inclusive.

2.0 BACKGROUND

The following summarizes the history of the Tank Farm spill of July/August 1986.

On July 7, 1986 while transferring solution from WC-119 (WCF sump tank) to WL-102 (PEW feed tank) 1850 gallons of liquid could not be accounted for. Approximately 2650 gallons were transferred from WC-119 while only 800 gallons were recieved in WL-102.

On August 2, 1986 while transferring solution from NCD-123 (NWCF decon area sump tank) to WL-102 682 gallons of liquid could not be accounted for. Approximately 2908 gallons were transferred from NCD-123 while only 2226 gallons were recieved in WL-102.

7532 gallons (+ or - 100 gallons) are missing from the two transfers and has most likely been released to the soil through a broken tile encasement. This solution is radioactively contaminated, ~~and may~~ *acidic* contain hazardous constituents.

Tests were conducted to determine the possible area of the release. Conclusions drawn from these tests are listed below. See figure 1. for the location of the lines, depth of the lines, area of the sampling site and the location of the junction box.

1. The solution entered valve box A-2 but did not get to WL-102.
2. The solution entered valve box A-2 and exited through two encasements to a common junction box that drains to the WL-101/102 vault.
3. The unaccounted for solution is not in the WM-181 vault.
4. The unaccounted for solution may have been released to the soil through a broken clay tile encasement for 3" PWA-203 and 3" PWA-1013.

Subcontractor support is required for sampling and analysis of the Tank Farm spill. The work will include: (1) preliminary investigation sampling and analysis of soil to determine the location of the break in the tile encasement; (2) remedial response investigation to determine the extent of remedial actions.

The preliminary investigation will include: collection of 25 soil samples and necessary sampling protocol, grid plan and sample location; handling, transportation and refrigeration of samples from collection point to laboratory per EPA requirements; laboratory analysis of 25 samples for pH, heavy metals (Ba, Cr, As, Ag, Pb, Hg, Se and Cd), nitrate, sulfate, fluoride and radionuclides; and reporting analysis results. All analysis will be in accordance with EPA approved methods. Services shall also include providing all necessary sampling equipment, decontamination equipment and chemicals, sample containers and preparation of containers to preserve samples. Services will also include the preparation of a formal final report.

A Health and Safety Plan tailored to the requirements of the Tank Farm spill sampling and remedial investigation will be prepared by the subcontractor before the start of work. This plan will follow the guidelines of the EPA Guidance on Remedial Investigations Under CERCLA, Chapter 5, Health and Safety Planning for Remedial Investigations and include the items addressed in the Safety Program Guidelines, Appendix A. The Health and Safety Plan will address hazards that the investigation activities may present to the investigation team and to the surrounding community. The plan should address all applicable regulatory requirements and detail personnel responsibilities, protective equipment, procedures and protocols, decontamination, training, and medical surveillance. The plan should identify problems or hazards that may be encountered and their solutions. Procedures for protecting third parties, such as visitors or the surrounding community, will also be provided.

subcontractor before the start of work. Services shall also include standard operating procedures for sampling activities that are not addressed in the Sampling Plan.

The subcontractor will provide a QA/QC Plan for soil sampling, handling, analysis and reporting activities including EPA chain-of-custody.

5.0 SPECIAL CONDITIONS AND CONSTRAINTS

Attachment I, WINCO hazardous and Radioactive Mixed Waste Sampling Subcontract Special Conditions, addresses special conditions that must be met to perform the work required by this SOW. The following additional special conditions or constraints are included:

The following are the radiation analysis results for a sample collected from the WC-119 transfer:

I-129	< 2.3761 E+00 D/sec/ml
Tritium	7.0453 E+02 +-2.26 E+01 D/sec/ml

The following are the radiation analysis results from the NCD-123 transfer:

Gross Beta	9.6021 E+03 +-9.49 E+02 B/min/ml
Uranium	8.4191 E-05 +-1.06 E-05 G/L

WINCO radiation worker training will be necessary for the soil sampling in the Tank Farm. WINCO will provide radiation Operational Health Physics (OHP) and Safety Engineering Support services.

In addition to the packaging requirements identified in the Soil Sampling Plan, 49 CFR packaging, marking, and labeling requirements for shipment of radioactive and hazardous materials shall be met. The subcontractor shall be responsible for shipping the samples if they have the personnel qualified to meet 49 CFR 173 training requirements for an originator of a radioactive materials shipment; otherwise, qualified WINCO Hazardous Materials Shippers and Radioactive Materials Shippers will be available through the Nuclear and Industrial Safety Department, Safety Support Subsection.

The use of a power auger to collect soil samples in the Tank Farm will not be acceptable because the Tank Farm subsurface lines are in some places 1-3 feet apart. Also, the exact locations of these lines is not always known. It will be necessary to use a hand auger or to excavate the soil by hand shoveling in order to collect soil samples.

The attached map shows four junction areas in the line where it is most likely that the spill has occurred. These junction areas will be sampled first. If it is determined that the leak has not occurred in one of those junction areas then additional sampling will be necessary.

SOIL SAMPLING TANK FARM AREA

UOR 86-0034

Date of Occurrence-July 7, 1986

Options for soil sampling in the Tank Farm west of valve box A-2.

- 1 No action, wait for the RCRA/CERCLA characterization.
Not acceptable because break in line needs to be determined as soon as possible. RCRA/CERCLA characterization could take 2-3 years.
- 2 Use a power auger to collect soil samples in the four junction areas of the line.
Not acceptable because some of the tank farm lines in the junction areas are 1-3 feet apart and the exact locations of the lines are not always known. A driller needs at least 6 feet between lines and the exact locations of the lines when using a power auger.
- 3 Use a hand auger to collect soil samples in the four junction areas of the line.
Not acceptable because of the gravel content in our soil. A hand auger will only to penetrate about 2-3 feet into CPP soils.
- 4 Use a hand shovel to excavate soil in the four junction areas of the line and then collect soil samples.
Because of the depth of the lines (approximately 10 feet) this option would require shoring the excavation and the exposure to workers would be high.
- 5 Use a hand shovel to excavate soil to a depth of approximately 6-7 feet (line would still have soil cover) in the four junction areas of the line and then with a hand auger collect soil samples.
Soil cover would decrease exposure to workers and is the acceptable option.

Occurrence Report

7/27/98

OCCURRENCE REPORT

ICPP Waste Management Activities

(Name of Facility)

Nuclear Waste Operations/Disposal

(Facility Function)

Idaho National Engineering Lab. / Lockheed Idaho Technologies Company

(Name of Laboratory, Site or Organization)

Name: White, James M.

Title: Supervisor, Waste Processing

Telephone No.: (208)526-3862

(Facility Manager/Designee)

Name: FINUP, TIMOTHY G

Title: PLANT SHIFT SUPERVISOR

Telephone No.: (208)526-3100

(Originator/Transmitter)

Name: T. G. Finup

Date: 02/16/1998

(Authorized Classifier (AC))

1. OCCURRENCE REPORT NUMBER: ID--LITC-WASTEMNGT-1997-0026
Hazardous Liquid Leak From Heat Trace Conduit

2. REPORT TYPE AND DATE:	Date	Time
<input type="checkbox"/> Notification	12/02/1997	1116 MTZ
<input type="checkbox"/> Initial Update	01/15/1998	1640 MTZ
<input type="checkbox"/> Latest Update	02/16/1998	1436 MTZ
<input checked="" type="checkbox"/> Final	02/23/1998	1308 MTZ

3. OCCURRENCE CATEGORY:
☐ Emergency ☐ Unusual ☒ Off-Normal ☐ Cancelled

4. NUMBER OF OCCURRENCES: 1 ORIG. OR:

5. DIVISION OR PROJECT: High Level Waste Operations

6. SECRETARIAL OFFICE: EM - Environmental Management

7. SYSTEM, BLDG., OR EQUIPMENT:
Waste Processing/ CPP-604/VES-WL-135

8. UCNI?: No

9. PLANT AREA: CPP-604/605

10. DATE AND TIME DISCOVERED:
12/01/1997 1030 (MTZ)

11. DATE AND TIME CATEGORIZED:
12/01/1997 1100 (MTZ)

12. DOE NOTIFICATION:

13. OTHER NOTIFICATIONS:

12/01/1997 1115 (MTZ) McNew, Jerry

DOE-ID

14. SUBJECT OR TITLE OF OCCURRENCE:

Hazardous Liquid Leak From Heat Trace Conduit

15. NATURE OF OCCURRENCE:

02) Environmental

B. Hazardous Substances/Regulated Pollutants/Oil Releases

02) Environmental

E. Agreement/Compliance Activities

16. DESCRIPTION OF OCCURRENCE:

On 11/18/97 at 1630, droplets of liquid were observed to be falling onto the ground from insulation on the jet discharge line from vessel VES-WL-135. An investigation was immediately commenced to determine the origin of the liquid. On 12/01/97, after extensive troubleshooting, the leak was found to be coming from an incomplete butt weld in an adjacent electrical conduit which supplies the heat trace for the discharge line. The liquid is believed to come from condensed vapors originating from New Waste Calcining Facility (NWCF) process off-gas. Therefore, the liquid would carry the same listed waste codes as process waste from NWCF. The leak did not cause a release to the environment of a significant fraction of a Reportable Quantity (RQ), but does meet the criteria of an Off-Normal event due to environmental reporting requirements to off-site agencies.

The Idaho Chemical Processing Plant (ICPP) is a U.S. Department of Energy (DOE) nuclear material processing facility. The ICPP is located within the Idaho National Engineering and Environmental Laboratory (INEEL) boundaries. Lockheed Martin Idaho Technologies Company (LMITCO) is the facility contractor for the ICPP. The mission of the ICPP is to receive and store nuclear fuels and radioactive wastes and prepare them for disposition.

Buildings CPP-604 and CPP-605 form a physically continuous structure. These buildings are used to process intermediate-level liquid waste generated by various plant processes. These wastes are then concentrated in the Process Equipment Waste (PEW) evaporators and transferred to the high-level waste tank farm. Valve box D-5 contains Process Off-Gas lines from the NWCF and the Waste Calcining Facility, a vessel (VES-WL-135) to collect condensate from these lines, and valves that allow them to be isolated.

On the afternoon of 11/18/97, facility personnel discovered two small puddles of liquid, one on the gravel and one on concrete steps at the exit from building CPP-605. They also noted droplets of liquid falling at a very slow rate from the

16. DESCRIPTION OF OCCURRENCE:

(continued)

insulation on the overhead jet discharge line from VES-WL-135, which is located in underground valve box D-5. A Radiation Control Technician surveyed the liquid and detected no radiation. An Industrial Hygienist also tested the liquid with litmus paper and determined that the pH was approximately zero, which made it RCRA hazardous, although there was no positive indication that the liquid originated from a process. The area was roped off and posted, the liquid and gravel was cleaned up and contained, and appropriate notifications were made to LMITCO management and DOE-ID. As the first step in troubleshooting the leak, a work order was processed to remove the insulation from the discharge pipe and inspect the piping for indications of leakage. In addition, measures were taken to reduce the rate of condensate buildup in VES-WL-135.

Following the initial inspection, which revealed no obvious source of leakage, a containment was installed around the suspect area. Over the next several days, facility personnel performed additional troubleshooting. At 1030 hours on 12/01/97, the source of the leak had not yet been positively identified, but facility engineering believed it likely that the leak originated from the electrical heat trace conduit which is tack welded to the discharge line. The engineers thought that NOx vapors could be drawn from the D-5 valve box into the conduit and then condense. In this case, the liquid would carry the same listed waste codes as the source of the NOx. This information, in turn, triggered a non-routine report to off-site environmental agencies and the Plant Shift Supervisor categorized the event as Off-Normal at 1100 on 12/01/97. At that time, the investigation for the source of the leak was still in progress. Later on 12/01/97, investigators determined that the leak had originated from an incomplete butt weld on the heat trace conduit where it was tack welded to the jet discharge piping.

The DOE-ID Facility Representative was informed of the problem when it was discovered, and was kept apprised until the event was categorized and formal notification took place.

17. OPERATING CONDITIONS OF FACILITY AT TIME OF OCCURRENCE:

The D-5 valve box and VES-WL-135 were in normal operation.

18. ACTIVITY CATEGORY:

Normal Operations

19. IMMEDIATE ACTIONS TAKEN AND RESULTS:

1. Placed containers below the leaks to catch the liquid.

2. Collected and contained the gravel and soil where the liquid fell.

19. IMMEDIATE ACTIONS TAKEN AND RESULTS:

(continued)

3. Roped and posted the affected area.

4. Made notifications to LMITCO management, environmental personnel, and DOE-ID.

5. Reduced the flow rate of process off-gas from the NWCF to slow the liquid buildup rate in VES-WL-135.

6. Initiated a work order to remove insulation in order to inspect the pipe for the source of the leak. Inspection completed.

7. Installed containment around the area of the leak following the initial inspection.

8. Tagged the jet discharge line heat trace out of service following the initial troubleshooting.

20. DIRECT CAUSE:

1) EQUIPMENT/MATERIAL PROBLEM

C. Defective Weld, Braze, or Soldered Joint

21. CONTRIBUTING CAUSE(S):

2. ROOT CAUSE:

4) DESIGN PROBLEM

B. Inadequate or Defective Design

23. DESCRIPTION OF CAUSE:

Direct Cause: Equipment/Material Problem - Defective Weld, Braze, or Soldered Joint

The point of the leak occurred where two lengths of conduit were joined using an incomplete weld. If the conduit joints were adequately sealed any accumulated liquid would drain back to Valve Box D-5 which is secondary containment for vessel WL-135. (See Corrective Actions 1 and 2.)

Root Cause: Design Problem - Inadequate or Defective Design

The heat trace conduit was left open on both ends. One end was in valve box D-5 and the other end in the vessel off-gas blower cell (VOG). Valve box D-5 is at atmospheric pressure and the VOG cell is at 1/2 to 1 inch of water vacuum. This pressure differential allowed vapors from valve box D-5 to be drawn through the conduit and when conditions permitted, condensation could occur. (See Corrective Actions 3 and 4.)

Informal Root Cause Analysis was used to determine causes for this occurrence.

24. EVALUATION: (By Facility Manager/Designee)

This type of leak will occur only while the NWCF is in operation. This is the only time that conditions in valve box D-5 are such that moisture will condense when air is moving through the conduit. When the NWCF is not in operation the temperature in valve box D-5 is ambient, therefore the air is not cooled when passed through the conduit. When the NWCF is operating the temperature in valve box D-5 is elevated allowing the air to hold more moisture which will condense when cooled to ambient temperature while passing through the conduit. The implemented changes will eliminate the movement of air through the conduit, thus eliminating the possibility of liquid accumulation.

25. IS FURTHER EVALUATION REQUIRED?:

Yes []

No [X]

26. CORRECTIVE ACTIONS:

(* = Date added/revised since final report was signed off)

01) See immediate actions taken.

TARGET COMPLETION DATE: 12/02/1997 COMPLETION DATE: 12/02/1997

02) Repair the incomplete butt weld in the conduit where the leak occurred.

TARGET COMPLETION DATE: 12/12/1997 COMPLETION DATE: 12/12/1997

03) Seal the open ends of the heat trace conduit in valve box D-5 to prevent flow of gases through the conduit.

TARGET COMPLETION DATE: 12/12/1997 COMPLETION DATE: 12/12/1997

04) Evaluate similar systems to determine if they may be at risk of a similar failure and recommend repairs as needed.

TARGET COMPLETION DATE: 03/30/1998 *COMPLETION DATE: 03/31/1998

27. IMPACT ON ENVIRONMENT, SAFETY AND HEALTH:

The potential hazards to human health and the environment from this leak are extremely low. All of the material involved in the leak was cleaned up, bagged, and placed in a temporary accumulation area pending final disposal. There was no release of a RQ of hazardous substance to the environment.

28. PROGRAMMATIC IMPACT:
None

29. IMPACT UPON CODES AND STANDARDS:
None

30. LESSONS LEARNED:
The discovery of this leak was made by the area operations personnel while walking through the area. This reinforces the importance of personnel walking down process areas in lieu of relying on automation.

31. SIMILAR OCCURRENCE REPORT NUMBERS:
1) ID--LITC-WASTEMNGT-1997-0023
2) ID--WINC-ICPP-1991-1054
3) ID--LITC-WASTEMNGT-1994-0003
4) HQ--SPR-SJ-1990-0004
5) ORO--MMES-K25GENLAN-1992-0067
6) ALO-LA-LANL-WASTEMNGT-1993-0002

32. USER FIELD #1:
5212

33. USER FIELD #2:

34. DOE FACILITY REPRESENTATIVE INPUT:

Entered by:

Date:

35. DOE PROGRAM MANAGER INPUT:

Entered by:

Date:

36. SIGNATURES: (FM's original signature on hardcopy)

Approved by: White, James M.
Facility Manager/Designee

Date: 02/16/1998
Telephone No.: (208) 526-3862

Approved by: MCNEW, JERRY L
DOE Facility Representative/Designee Telephone No.: (208) 526-5108

Approved by: Approval delegated to FR
DOE Program Manager/Designee

Date:
Telephone No.:

H.L. Lord Report



Idaho National Engineering Laboratory

HLL-02-92

From : H. L. Lord
Phone : 525-5467/MS-2304
Date : March 25, 1992
Subject: Description of Known Contamination in the ICPP High Level Waste Tank Farm

To : A. R. Eberle, Manager
HLWTFR Project Implementation

cc:

M. J. Beer, MS-2304	R. D. Modrow, MS-5306
G. E. Bingham, MS-5306	S. S. Mascareñas, MS-2304
M. R. Christensen, MS-2304	F. R. Phelps, MS-2304
C. M. Cole, MS-2304	P. B. Summers, MS-2304
M. Cukurs, MS-5306	C. J. Urbanski, MS-2304
K. F. Hassing, MS-2304	H. L. Lord - 2
H. C. Hund, MS-2304	Project File - HLWTFR
H. A. Jaafar, MS-2304	

Attached for your information is a Description of Known Contamination in the ICPP High Level Waste Tank Farm.

If you have questions call me at 525-5467.

H. L. Lord, Project Engineer
HLWTFR Project

HLL/



Westinghouse Idaho Nuclear Company, Inc.

**A DESCRIPTION OF KNOWN
CONTAMINATION IN THE ICPP
HIGH LEVEL WASTE TANK FARM**

Prepared by:
Harry L. Lord
WINCO Major Projects
March 27, 1992

I. Overview

The High Level Waste Tank Farm Replacement (HLWTFR) Project plans to build four 500,000 gallon waste tanks north of the existing Idaho Chemical Processing Plant (ICPP) Tank Farm. As part of this construction, the Project will tie into the existing High Level Liquid Waste (HLLW) piping. This tie-in will cause excavation in the Tank Farm area.

Past leaks and spills of radioactive liquids have occurred in the Tank Farm area. The Project requires knowledge of these leaks and spills to perform waste management and excavation planning. A review of known data and planned characterization activities was conducted and is presented here.

II. Background Knowledge

The WINCO Environmental Compliance (EC) Department has assigned areas and numbers to locations where leaks and spills are suspected to have occurred. These areas are designated as Environmentally Controlled Areas (ECAs) and access is controlled by EC. Each area will be discussed as to historical background, possible impact on the Project, and planned activities by EC or the HLWTFR Project. For specific locations see Attachment 1.

"No Action" determination paperwork for some of these sites was submitted to DOE, EPA, and IDHW in January 1992. Concurrence could be received any time but may be delayed until January 1993 when EC submits the annual report of ECA activities. Concurrence would mean that EC would have "No Action" for these sites.

The ECA disturbance notification process was initiated in May 1991. Completion of this process requires a determination of disturbance by EC and submission of a Letter of Intent (LOI) by the HLWTFR Project. The LOI requires data from the characterization being performed the summer of 1992 by EC.

ECA-16 In January 1976, HLLW solution was transferred from Tank WM-181 to the PEW evaporator. A leak in the transfer line resulted in the contamination of about 25 cubic feet of soil. The contaminated soil was left in place. The HLWTFR Project design has avoided this area. Since the documentation of this spill is lacking EC has submitted "No Action" paperwork to the EPA, DOE, and State of Idaho Project Managers.

ECA-20

Radioactive liquid waste was routinely unloaded from transport vehicles at the CPP-604 unloading area. The wastes were processed at the PEW evaporator. Occasional spills occurred during unloading, but were cleaned up. Since these spills were cleaned up EC has submitted "No Action" paperwork to the EPA, DOE, and State of Idaho Project Managers.

This area will be completely excavated by the HLWTRF Project. If the site is "closed" this will be no problem. If the site is not "closed," the Project will have to proceed with ECA disturbance notification to EC, IDHW, EPA, and DOE.

ECA-25

In August 1960, the area north of CPP-604 was found to be contaminated as a result of a ruptured transfer line. Approximately nine cubic yards of contaminated soil were removed and sent to the Radioactive Waste Management Complex (RWMC). Since this area was cleaned up EC has submitted "No Action" paperwork to the EPA, DOE, and State of Idaho Project Managers.

This area will be completely excavated by the HLWTRF Project. If the site is "closed" this will be no problem. If the site is not "closed" the Project will have to proceed with ECA disturbance notification to EC, Idaho, EPA, and DOE.

ECA-26

In May 1964, a hose coupling leak was detected during a steam flushing operation designed to remove radioactive contamination from existing pipelines. The contaminated fluid was dispersed over a 3-4 acre area inside the ICPP fence, but contamination above background was detected outside the fence (~10 acres) as well. The contaminated material was removed. Later a building (CPP-699) was erected over a portion of the contaminated area. The radioactive fluid was composed of Sr-90, Ru-106, Ce-144, and Cs-137. EC plans to install an "observation well" and a sampling well in this area during the summer of 1992.

The Project has obtained a determination that the construction of the security fence in this ECA does not constitute a disturbance. The construction of the transfer lines will most likely require an ECA disturbance notification. This decision was requested from EC in May 1991.

ECA-28

In October 1974, contaminated soil reading up to 40 R/hr was discovered adjacent to a HLLW transfer line, about 10 feet south of WM-181, near valve box A-6. Investigations showed that a small hole (0.15") had been accidentally drilled through the pipe during a modification in 1955. It is

estimated that as much as 120 gallons of HLLW, containing about 6000 Ci of radioactivity, may have been released at a depth of seven feet below grade. Roughly 60 cubic yards of contaminated soil was sent to the RWMC, but a percentage of the contaminated soil was left in place (about 3000 Ci). Based on soil measurements, it is estimated that about 5 cubic yards of contaminated soil remain in this area. Eleven monitoring wells were installed and they showed that the contamination was between 6 and 10 feet below grade with the highest reading of 90 R/hr at 8 feet. These monitoring wells were sealed. EC plans to install an "observation well" in this area during the summer of 1992. Some design features have been relocated and the HLWTFR Project plans to use shoring, if necessary, to avoid this site.

ECA-30

In June 1975, contaminated soil was found near valve box B-9. Contaminated soil from a 20 square foot area was removed and sent to the RWMC. Since this area was cleaned up EC has submitted "No Action" paperwork to the EPA, DOE, and State of Idaho Project Managers.

If the site is not "closed" the Project will have to proceed with ECA disturbance notification to EC, Idaho, EPA, and DOE.

ECA-31

In September 1975, contaminated soil was found south of tank WM-183. The contaminated zone extended 150 feet by 20 feet along a pipe at a depth of 12-20 feet. The waste, estimated to be approximately 14,000 gallons, apparently leaked through an isolation valve from a High Level Liquid Waste (HLLW) transfer line to a cooling water drain line. The carbon steel cooling water drain line corroded and allowed the HLLW to leak into the soil. About 30,000 Ci of radioactivity, consisting of Cs-137, Sr-90, and Y-90 were estimated to have been released. Due to the quantity of contaminated soil (about 800 cubic yards) and depth of contamination, the soil was left in place. Several "monitoring wells" were installed to determine the extent of the contamination. These "monitoring wells" are pipes driven into the ground. Monitoring is done quarterly by lowering a radiation instrument down these pipes and recording the readings at 2 foot intervals. The data from these wells give good indication of the extent and levels of the contamination at this location (See the attached Radiation Isopleths for more information). EC is planning to install six more "monitoring wells" in this location during the summer of 1992.

A detailed discussion of this site follows. ECA disturbance notification must be completed.

ECA-32 In December 1976, contaminated soil reading 2 R/hr was detected southwest of valve box B-4. A leaking standpipe next to the valve box was assumed to be the source. However, similar contamination readings were found in soil located about 50 feet northwest of the same valve box. The contaminated soil was left in place. EC is planning to install a "monitoring well" and, if contamination levels permit, a sampling well at this location this summer.

The project will have to proceed with ECA disturbance notification for this area.

Other areas of suspected contamination not included in the ECAs exist in the Tank Farm area.

The area north of CPP-604 was excavated in the ^{WL-132 & 133} early 1980s for the installation of a new Low Level Waste tank. Contaminated soil was discovered during this excavation. Soil with contact reading less than 5 mR/hr was used to backfill the excavation. As the excavation for the HLWTFR Project will encompass some of the same area, there is a reasonable expectation to encounter this soil. The HLWTFR Project plans to drill two boreholes in this area and sample the soil to determine contamination levels.

During the above construction, contamination was discovered near the bottom of valve box A-2. The HLWTFR Project plans to excavate in this area so contamination should be expected.

III. Monitoring Wells

The ICPP Tank Farm contains 37 "monitoring wells." The wells are basically pipes driven into the ground to various depths. Radiation profiles are obtained by lowering a detector down the wells and recording the readings at two foot intervals. Readings are taken quarterly so we have a reasonably good idea of the radiation levels where the monitoring wells are located. The location of the wells is given on the attached plot plan. (Attachment 2)

The attached annotated plot plan (Attachment 3) gives the readings from this monitoring. This data is from the 1990 and 1991 surveys and shows the maximum readings in the wells and the depth at which the highest reading was obtained.

IV. Conclusions

Radioactive contamination in the soil presents one of the challenging problems to be overcome when excavating in the tank farm area. The area between tanks 181, 183, 184, and 185 is highly contaminated. This is consistent with the historical data for ECA-31.

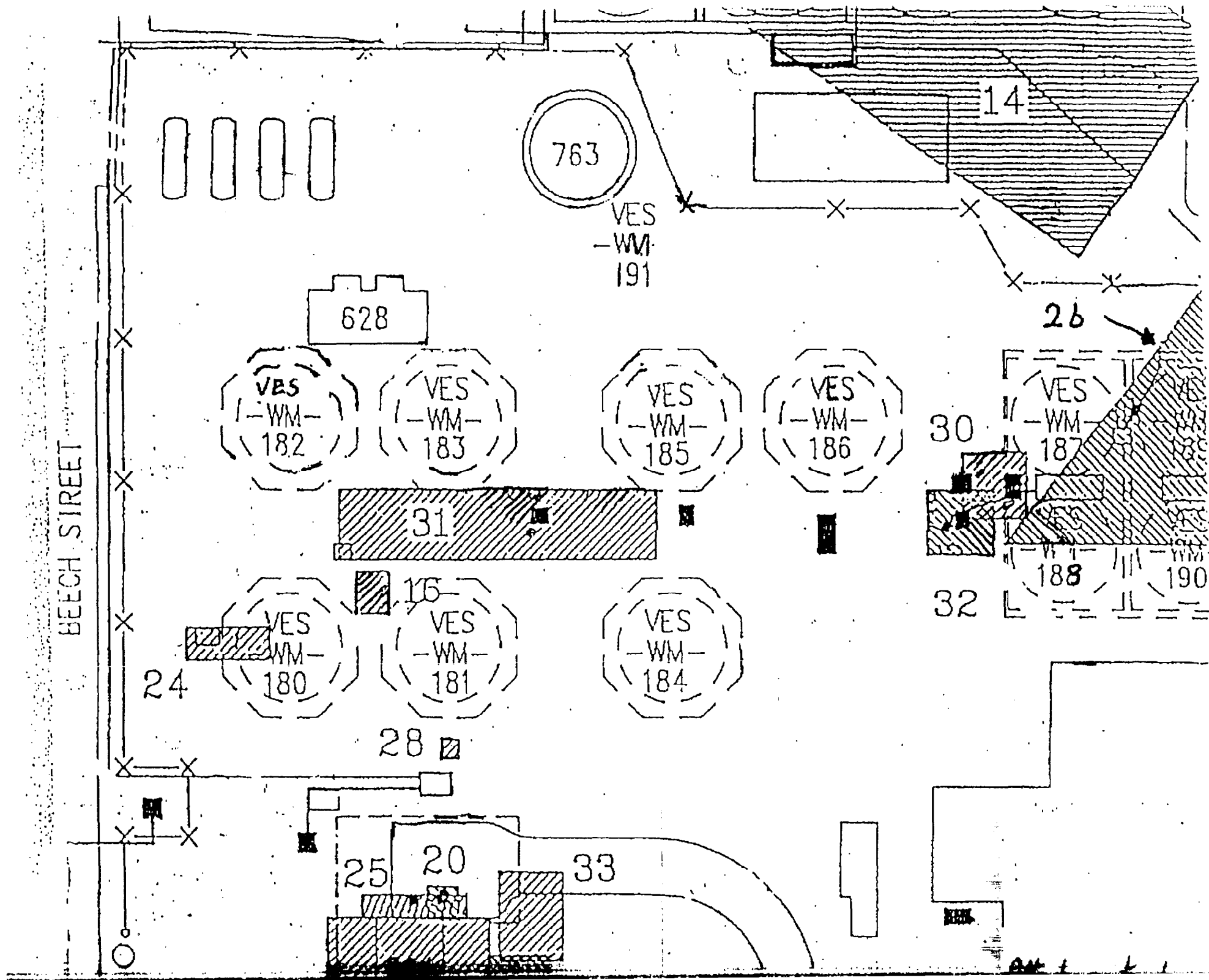
The monitoring well data also suggests there is some contamination in the south portion of the tank farm. The readings from wells A-52 and A-56 show contamination at 32 feet in the 200 mR/hr range. This is consistent with the contamination discovered during excavation in the early 1980s, but deeper. The HLWTFR Project does not plan to excavate to this depth in this area.

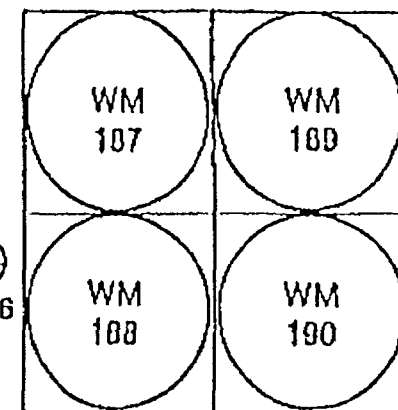
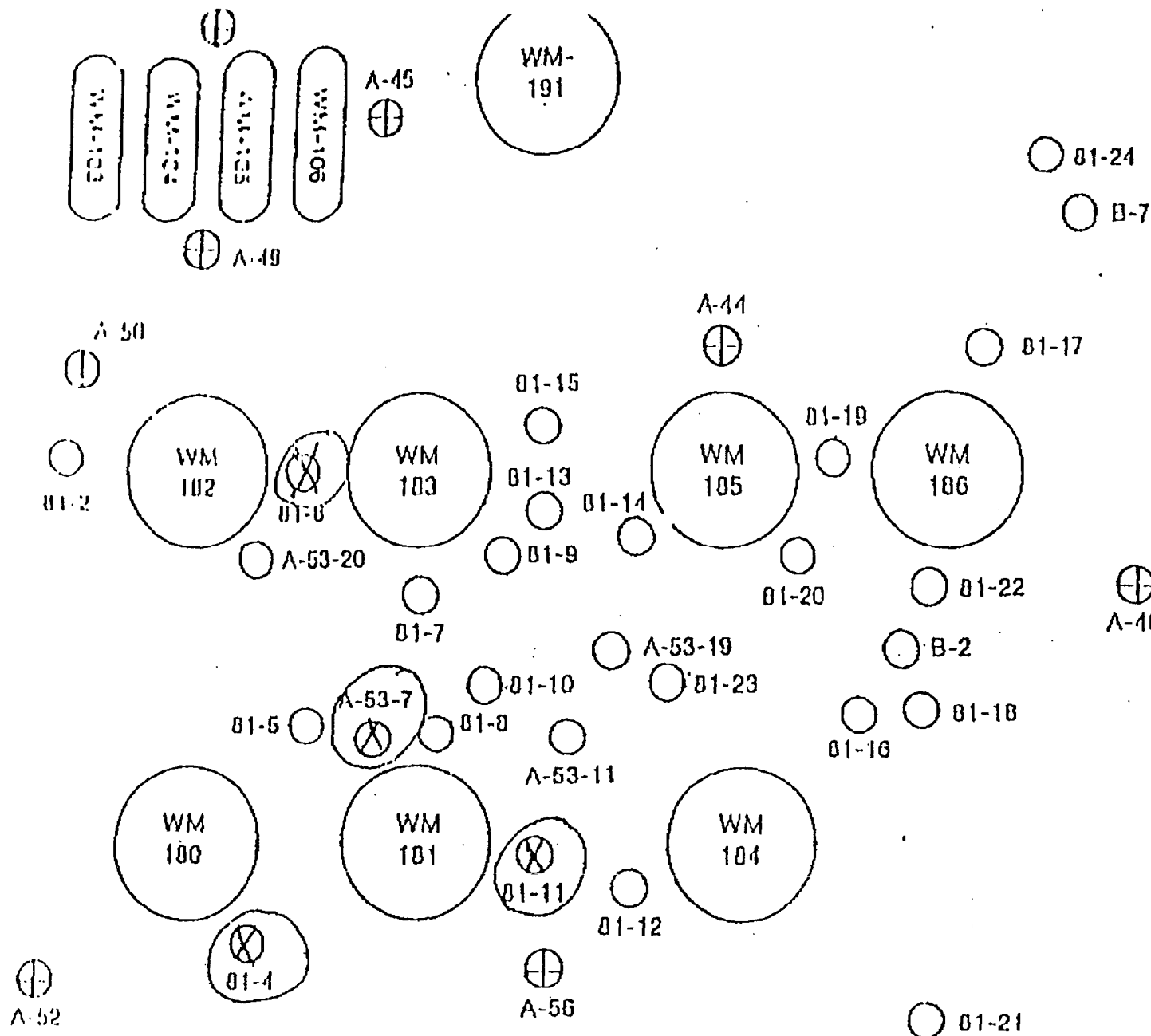
The HLWTFR Project plans to modify valve box A-6 in the area of ECA-31. This will involve digging to the top of the valve box, forming and placing concrete to bring the box walls above the surface. It also involves replacing valves in the boxes A-5 and A-6. The radiation fields in this area may be too high to allow this work to be accomplished without shielding. Data from surveys taken inside of the valve boxes after decontamination and from the new "monitoring wells" will be necessary before determining shielding requirements.

The HLWTFR Project plans to excavate the area north of CPP-604 to install the new valve box and make connections to the present system. Contaminated is expected in this area. We know contamination is present at the well locations (A-52 and A-56) and can infer that it exists throughout the area. The level of contamination is not high enough to halt construction but must be included in the excavation planning.

The other excavation areas for the HLWTFR Project can be reasonably assumed to be clean. The area north of the WM-103 to 106 tanks does not have a source and the monitoring well (A-48) located there has zero readings. The west side of the tank farm area also does not have a source and the wells (A-50 & 81-2) have zero readings. The area north of WM-186 does not have a source and wells (B-7, A-44, 81-17, & 81-24) have zero readings.

The two problem areas, as far as excavation, into contaminated soil is concerned for the HLWTFR Project are, 1) the ECA-31 area, and 2) the area north of CPP-604. The work in ECA-31 will have to be carefully planned to avoid radiation exposure to workers. Data from the EC characterization this summer and radiation surveys of the valve boxes will have to be evaluated to plan this activity. To complete the work required by the Project Design Criteria the area north of CPP-604 will have to be extensively excavated. The Project must plan for portions of this excavation to be in low level (<10 mR/hr) soil.





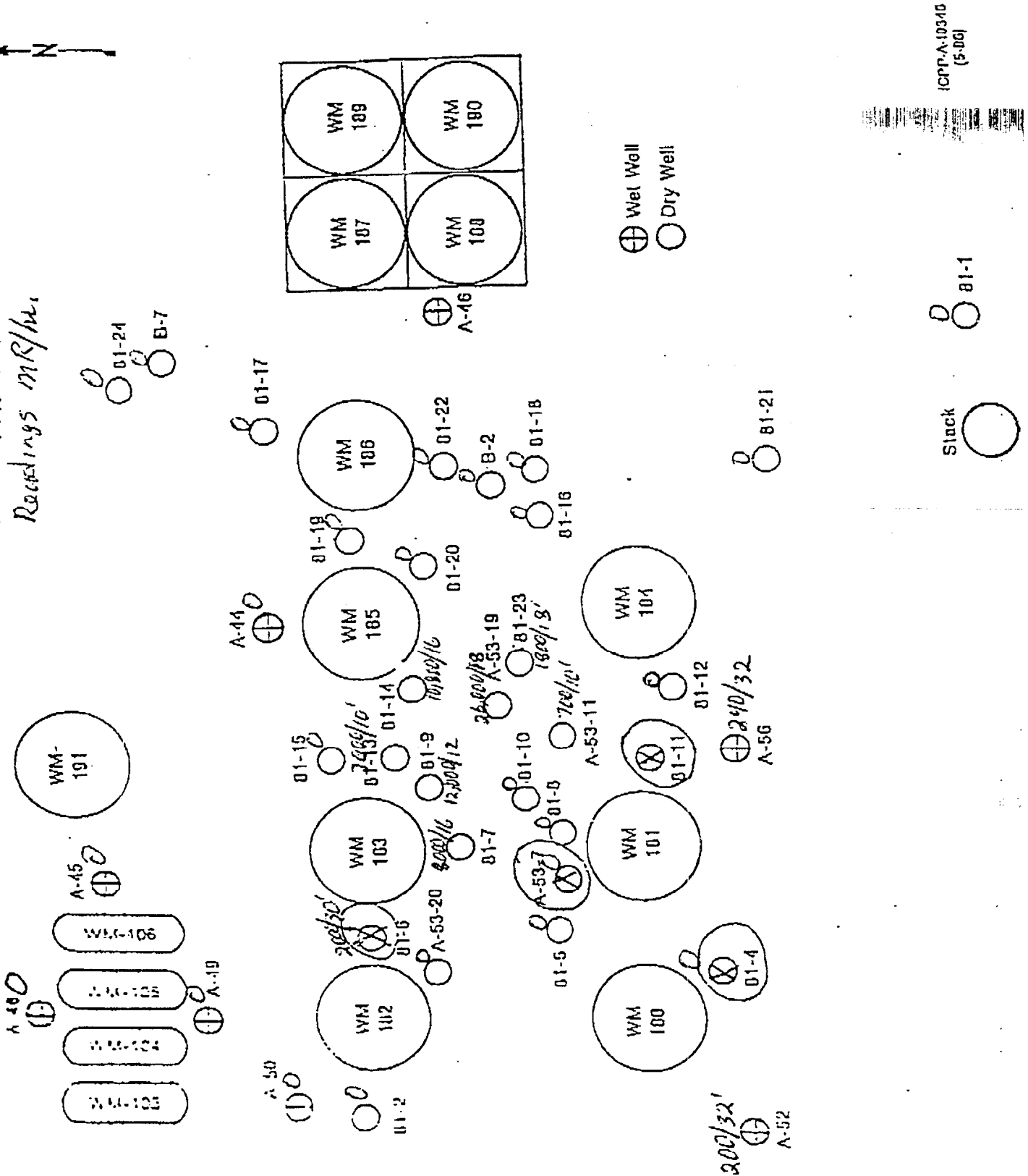
Wet Well
Dry Well

TANK FARM OBSERVATION WELLS LOCATION MAP

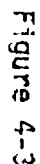
6-20 (8-55) (5-00)

3.

Highest Reading/Depth
From 1990+91 Data
Readings mR/hr.



(CPT-A-103/10
(5-00)



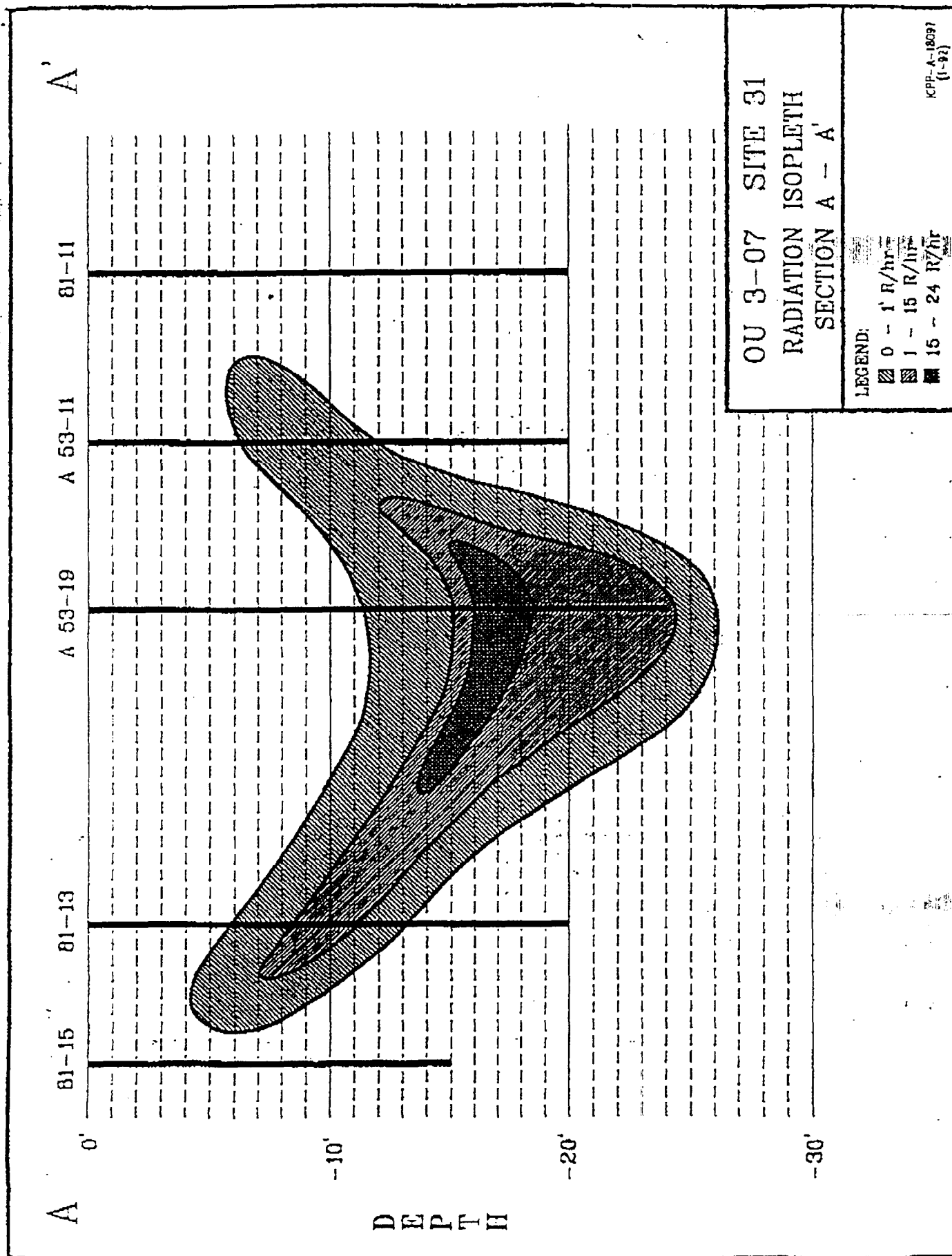


Figure 4-4

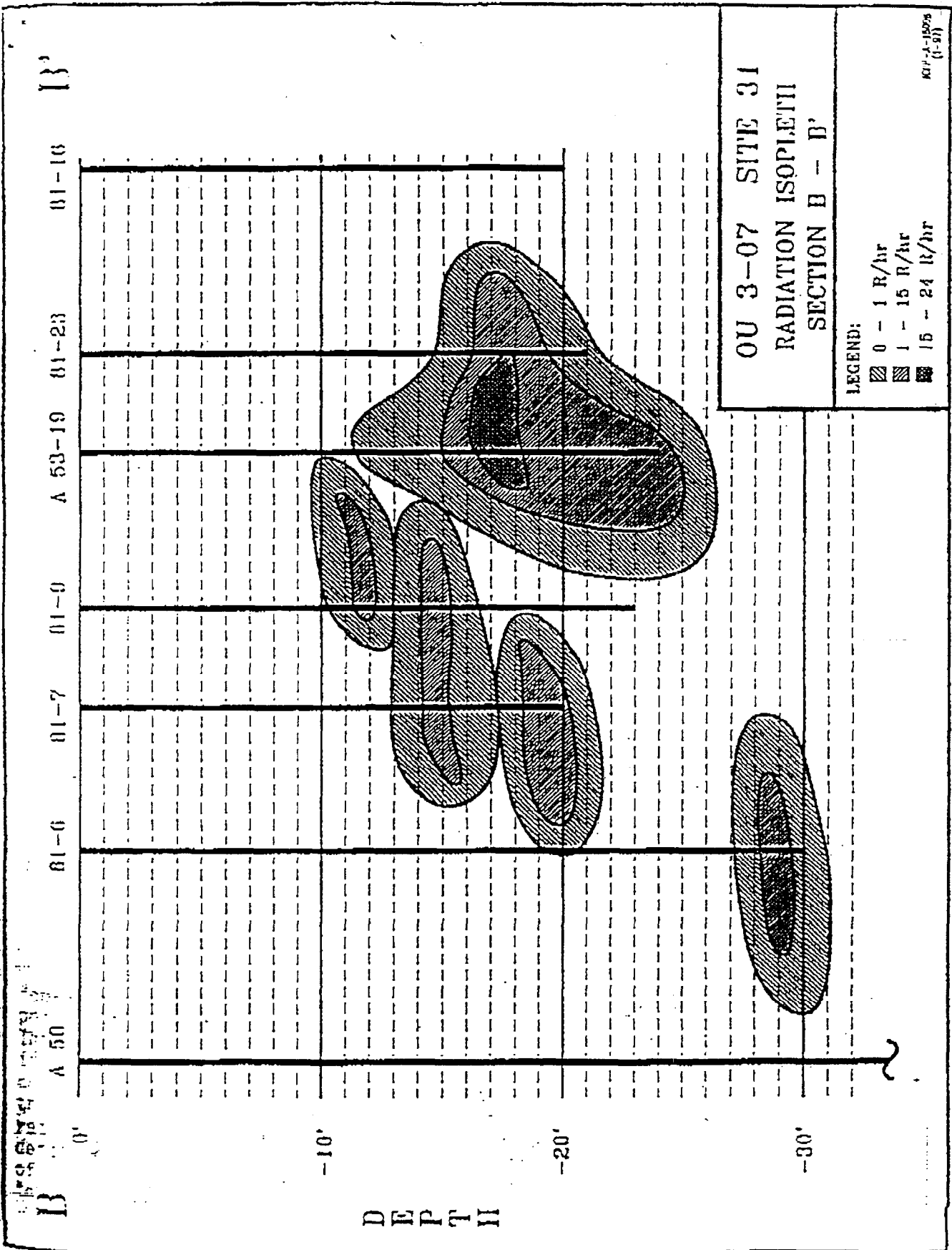


Figure 4-5

Appendix E-5
Frank Ward Interviews

Frank S Ward,8/27/98 8:51 AM -0600,Re: Frank Ward Interview, 8/12/98

X-Lotus-FromDomain: INEL
From: "Frank S Ward" <FSW2@inel.gov>
To: hns@inel.gov (Ross Johnson)
Date: Thu, 27 Aug 1998 08:51:21 -0600
Subject: Re: Frank Ward Interview, 8/12/98
Mime-Version: 1.0

→ The Hydraulic fluid spill was less than 1 gallon, the hydraulic hose to an
Fg outrigger burst when the P&H crane was being started. The hydraulic system
was not being used to move the outriggers at that time. The area is known
and is covered with plastic and soil.

The sheet of lead has been reported and we have pictures of it.

The leaks from the unions associated with ECA #16 were reported by Dan
Staiger. The above ground sump jet transfer system has not been used since
I have been here, Sep 1977.

hns@inel.gov (Ross Johnson) on 08/14/98 02:30:04 PM

To: Tank Farm Release Sites Project <gel>
cc: FSW2 (bcc: Frank S Ward/FSW2/LMITCO/INEEL/US)
Subject: Frank Ward Interview, 8/12/98

Notes from interview on 8/12/98 with Frank Ward, ID=FSW2, regarding his
recollection (and hearsay) of contamination releases since his employment,
as follows:

Leaks and soil contamination incidents that were not reported because they
did not involve radioactivity include a hydraulic fluid spill from the P&H
crane blowout located between WM-187 and WM-189 (closer to WM-189).
Hydraulic hose burst. Spill quantity (guessing 100gal.) or exact area
unknown. Occurred some time in 1986-1988 era. Should have been reported
in monthly report to DOE.

At the corner of Fir Street by B-1 Valve box, 1/4-in. lead sheet is buried
below ground surface for shielding rad. contamination from soil below. The
sheet is not reported or recorded anywhere.

When asked what reports other than the UOR's could have indicated soil
contamination incidents or leakage, Frank thought that either monthly
production/operational reports to DOE, operator's daily logs, or
supervisor's daily logs could have reported leaks or soil contamination.

Soil contamination from minor (thought to be insignificant) spills and
leakage were routinely stopped and repaired as they were discovered without

Printed for Ross Johnson <hns@inel.gov>

Frank S Ward,8/27/98 8:51 AM -0600,Re: Frank Ward Interview, 8/12/98

being reported, excepted possibly being reported as entries in the operator's or supervisor's daily logs.

Dan Steiger, 6-3121, at WCB RM. 171, has compiled a complete set of production/operational reports. Check with Dan for his recollection of other soil contamination incidents.

ECA #16 (CPP-16) records contamination resulted from leakage from a valve in a process line, but does not indicate leakage from pipe unions. All the unions in the line had to be tightened periodically because of leakage which resulted in contamination. These spills still remain at each union location.

Frank, please reply to this note if you have clarifications or recall additional information regarding our conversation or soil contamination incidents at INTEC Tank Farm.

+-----+
Ross E. Johnson, A.I.A. Architect Id. #AR-1463
(208) 526-2431 org: 4130
E-mail address: hns@inel.gov

+-----+
Facility Engineering Unit FAX(208) 526-2681
Mechanical, Civil, & Industrial Engineering Department
Lockheed Martin Idaho Technologies Co. (LMITCO)
Idaho National Engineering & Environmental Laboratory (INEEL)
Idaho Falls, Idaho 83415-3650
+-----+



hns@inel.gov (Ross Johnson) on 11/04/98 07:58:26 AM

To: MCALKD
cc: (bcc: K D Mcallister/MCALKD/LMITCO/INEEL/US)
Subject: Frank Ward Interview, 8/12/98

>Date: Fri, 14 Aug 1998 14:30:04 -0600
>To: TFF_OU-3-14_File
>From: Ross Johnson <hns@inel.gov>
>Subject: Frank Ward Interview, 8/12/98
>Cc: FSW2
>Bcc:
>X-Attachments:
>
>Notes from interview on 8/12/98 with Frank Ward, ID=FSW2, regarding his
>recollection (and hearsay) of contamination releases since his employment,
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>-----
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>incidents at INTEC Tank Farm.

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+-----+

Ross E. Johnson, A.I.A. Architect

E-mail address: hns@inel.gov

+-----+

Facility Engineering Unit

Lockheed Martin Idaho Technologies Co. (LMITCO)

Idaho National Engineering & Environmental Laboratory (INEEL)

Idaho Falls, Idaho 83415-3650

+-----+



hns@inel.gov (Ross Johnson) on 11/04/98 07:57:57 AM

To: MCALKD
cc: (bcc: K D Mcallister/MCALKD/LMITCO/INEEL/US)
Subject: ECA-16 Pipe Union Leaks

Notes from phone interview with Frank Ward, ID=FSW2, on 10/27/98 regarding clarification of 8/12/98 interview comments on ECA-16 and other leakage from pipe unions during transfers of low-level contaminated service water from tank vaults to WL-102, as follows:

ECA-16 resulted from an occurrence reported in Occurrence Report #76-03.

Between about 1967 to 1976-7, all the tank vaults sumps were evacuated periodically by steam-jetting the sumps with flex-hose evacuation lines to the PEW tank (WL-102) to remove low-level contaminated water buildup from the vaults. The level of activity in the contaminated water would vary depending which tank vault was being evacuated.

The flex-hoses used for these transfers were interconnected in 20-foot lengths to the total lengths necessary for each evacuation operation. The flex-hose lines, depending on which vault was being evacuated, would have been between 80-500 ft. long, and the exact line laydown location for each transfer would vary.

The occurrence reported in Occurrence Report #76-03 was a result of a failure in one of the flex-hose connections during a specific transfer. That occurrence causes 3000 gals. of service waste to spill on the ground. What was not reported was other minor leaks of this type during this and other service waste transfers from hose connections that would have to be periodically repaired and the leaks, if any, that would drip from hose sections as they were moved from location to location.

After approx. 1976-7, hard lines were installed for these transfers, and the flex-hoses were not used again. At various times since that installation the affected areas of the tankfarm has all been excavated and backfilled with a mix of low-level contaminated soil. According to Frank, it would be near impossible to find the results of these minor hose leaks, even if the exact location of each hose laydown could be determined.

+-----+
Ross E. Johnson, A.I.A. Architect
E-mail address: hns@inel.gov

+-----+
Facility Engineering Unit
Lockheed Martin Idaho Technologies Co. (LMITCO)

Idaho National Engineering & Environmental Laboratory (INEEL)
Idaho Falls, Idaho 83415-3650

+-----+



hns@inel.gov (Ross Johnson) on 11/04/98 07:55:59 AM

To: MCALKD
cc: (bcc: K D Mcallister/MCALKD/LMITCO/INEEL/US)
Subject: Re: Frank Ward Interview, 8/12/98

>X-Lotus-FromDomain: INEL
>From: "Frank S Ward" <FSW2@inel.gov>
>To: hns@inel.gov (Ross Johnson)
>Date: Thu, 27 Aug 1998 08:51:21 -0600
>Subject: Re: Frank Ward Interview, 8/12/98
>Mime-Version: 1.0
>
>The Hydraulic fluid spill was less than 1 gallon, the hydraulic hose to an
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>Staiger. The above ground sump jet transfer system has not been used since
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>
>
>hns@inel.gov (Ross Johnson) on 08/14/98 02:30:04 PM
>
>
>To: Tank Farm Release Sites Project <gel>
>cc: FSW2 (bcc: Frank S Ward/FSW2/LMITCO/INEEL/US)
>Subject: Frank Ward Interview, 8/12/98
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>Notes from interview on 8/12/98 with Frank Ward, ID=FSW2, regarding his
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>incidents at INTEC Tank Farm.

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>

>

>+-----+

>Ross E. Johnson, A.I.A. Architect Id. #AR-1463

>(208) 526-2431 org: 4130

>E-mail address: hns@inel.gov

>+-----+

>Facility Engineering Unit FAX(208) 526-2681

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Idaho Falls, Idaho 83415-3650

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hns@inel.gov (Ross Johnson) on 11/04/98 07:55:26 AM

To: MCALKD
cc: (bcc: K D Mcallister/MCALKD/LMITCO/INEEL/US)
Subject: Frank Ward Interview, 8/12/98

Notes from interview on 8/12/98 with Frank Ward, ID=FSW2, regarding his recollection (and hearsay) of contamination releases since his employment, as follows:

Leaks and soil contamination incidents that were not reported because they did not involve radioactivity include a hydraulic fluid spill from the P&H crane blowout located between WM-187 and WM-189 (closer to WM-189). Hydraulic hose burst. Spill quantity (guessing 100gal.) or exact area unknown. Occurred some time in 1986-1988 era. Should have been reported in monthly report to DOE.

At the corner of Fir Street by B-1 Valve box, 1/4-in. lead sheet is buried below ground surface for shielding rad. contamination from soil below. The sheet is not reported or recorded anywhere.

When asked what reports other than the UOR's could have indicated soil contamination incidents or leakage, Frank thought that either monthly production/operational reports to DOE, operator's daily logs, or supervisor's daily logs could have reported leaks or soil contamination.

Soil contamination from minor (thought to be insignificant) spills and leakage were routinely stopped and repaired as they were discovered without being reported, excepted possibly being reported as entries in the operator's or supervisor's daily logs.

Dan Steiger, 6-3121, at WCB RM. 171, has compiled a complete set of production/operational reports. Check with Dan for his recollection of other soil contamination incidents.

ECA #16 (CPP-16) records contamination resulted from leakage from a valve in a process line, but does not indicate leakage from pipe unions. All the unions in the line had to be tightened periodically because of leakage which resulted in contamination. These spills still remain at each union location.

Frank, please reply to this note if you have clarifications or recall additional information regarding our conversation or soil contamination incidents at INTEC Tank Farm.

Appendix E-6
Devon Meacham
Interview



hns@inel.gov (Ross Johnson) on 11/04/98 07:55:23 AM

To: MCALKD
cc: (bcc: K D Mcallister/MCALKD/LMITCO/INEEL/US)
Subject: Devon Mecham Interview, 7/20/98

Notes from interview on 7/20/98 with Devon Mecham, ID=DMECHAM, regarding his recollection (and hearsay) of contamination releases since his employment from 3/23/59, as follows:

Dave Makivek has three documented releases at tank farm. Talk to him for documentation and details. One of these incidents according to D. Mecham's recall is as follows:

<<Water Relief Valve WRV-147 >>: Happened in the 1960's or 1970's. An incident regarding Water Relief Valve WRV-147, located southeast of VES-183 in relief pipe line to 3"WRN-1037 which intersects with process pipe line 3"PVA-1014. 3"WRN-1037 is a carbon steel relief line used to inject steam into 3"PVA-1014 stainless steel encased process line between process transfers. The 3"WRN-1037 valve was left open and process solutions backflowed into 3"WRN-1037 carbon steel line. The relief line corroded and caused a release into the soil. The lines are located approx. 7-8 ft. below surface.

Another discovery of soil contamination that may have been caused by the WRV-147 incident: In 1978 during excavation for new process piping construction (pipes HSA-104733, PLA-104708, PLA-104710 & PLA-104733), soil contamination was discovered in an area where the pipe routing was planned. That area was, according to D. Mecham's recall, somewhere between DVB-WM-PW-B3 and DVB-WM-PW-C15 or somewhere nearly south of there. (It is D. Mecham's guess that the contamination could be caused by migration of leakage for the WRV-147 valve incident.) Pipes HSA-104733, PLA-104708, PLA-104710 & PLA-104733 were rerouted south at DVB-WM-PW-B3 to avoid the contaminated area.

Another incident according to D. Mecham's recall was located near the SW corner of CPP-635: The incident caused surface contamination resulting from some failure in a procedure to decontaminate a process line by injecting steam into the line. There was a failure at the point of injection, and contaminated steam from the process line was ejected into the air, causing surface contamination in the surrounding area. To D. Mecham's recall, the area was decontaminated and contaminated soil hauled off.

To D. Mecham's recall, in the earlier days of CPP minor leaks which may have contaminated the soil, if noticed, were repaired without much, if any,

documentation or incident reporting. Some of the oldtimers who would have been directly involved in these repairs or incidents and who may remember some of them. Some of these people and their capacity are:

Reece Kern (retired, possibly in Idaho Falls).

Jerry Cole (retired in Idaho Falls) -- Plant Eng/ mgr. Hired D. Mecham.

Worked for Reece Kern. 523-3691 home phone.

George K. Cedarburg (retired in Firth) -- Safety Analysis.

George Lohse (retired in Idaho Falls) -- CPP troubleshooter (tech.

planner/supervisor/ mgr.? involved in planning/directing the fixes).

522-6479 home phone.

Phil Richert (retired in Idaho Falls) -- Plant Engineer, knows G. Lohse.

522-2374 home phone.

Don Reed (retired, possibly in Idaho Falls) -- Plant Mgr.

Pete Meckelsen (retired in Idaho Falls) -- Plant supervisor/ mgr. 529-5808 home phone.

According to D. Mecham, another area that has since been D&D'd (in 1960's or 1970's) concerns a building project and process piping called <<RALA>> may or may not have contamination. RALA was, according to D. Mecham, formerly secret in the early days to conceal imaging offgas from operations from spy satellites. Its function was to condense evaporative offgas from CPP-631 and reroute the condensate back the CPP-604 for processing. RALA was located east of CPP-659 near the fourth bin set (CPP-761). Evap. piping was routed from CPP-631 under Olive Ave. to RALA. Condensate piping was routed from RALA back to CPP-604. The piping may either have been capped/abandoned or removed. Mecham did not know of specific incidents or contamination regarding RALA but thought there could have been.

<<<<<To D. Mecham>>>>>: Please reply to this note with corrections, if your recall of events are not as noted herein, or if you can recall additional information regarding contamination incidents at CPP Fank Farm.

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hns@inel.gov (Ross Johnson) on 11/04/98 07:58:19 AM

To: MCALKD
cc: (bcc: K D Mcallister/MCALKD/LMITCO/INEEL/US)
Subject: Dan Staiger Interview, 8/12/98

>Date: Fri, 14 Aug 1998 14:29:59 -0600
>To: TFF_OU-3-14_File
>From: Ross Johnson <hns@inel.gov>
>Subject: Dan Staiger Interview, 8/12/98
>Cc: staigmd
>Bcc:
>X-Attachments:
>
>Notes from interview on 8/12/98 with Frank Ward, ID=STAIGMD, regarding his
>recollection (and hearsay) of contamination releases since his employment,
>as follows:
>
>-----
>
>Chromated water leakage continues to occur throughout the tank farm at
>joints and unions in steam piping, but are not reported at soil
>contamination incidents.
>
>In early 70's, chromate leak adjacent to condenser pit -387 from buried
>valves.
>
>Also in early 70's, chromate leaks from buried valves north of CPP-635.
>
>Transfer line from WM-181 to WL-102 set in inverted U-shaped culvert w/
>sand bottom leaked. Valve w/ teflon gasket failed through gasket.
>Gasket replaced. Unions in pipe joints leaked and were periodically
>tightened to stop leaks. Leaks contaminated soil. Leaking valve in
>manhole near WM-181 was replaced. Contaminated soil remained and not
>reported, except maybe in daily logs.
>
>Exterior area NE of CPP-628 between -191 and -106 was used as area to
>decon contaminated backhoes, and trucks, & heavy equipment. Equipment was
>decon'd. by steam cleaning to remove contamination. Soil would have
>contamination from radionuclides and petroleum products. No reports
>recorded for soil contamination resulting from decon operations.
>
>12- or 14-in. dia. service waste line on NW corner of CPP-604 was removed
>and replaced. Soil could have been contaminated from chromated waste and
>other chemical leakage as result of D&D.
>
>Past employees (retired) who may have recollection of undocumented
>leakages, spills, and nonrad. contamination incidents, that would have

>been cleaned up/repared as normal work operations:

>

> Pete Mickelsen
> Moyland Young
> G.E. Lohse
>

>Septic Tank/Cesspool draining from CPP-604 possibly contaminated with
>mercury or petroleum oil from instruments. Mercury used to calibrate
>monometer instruments was occasionally spilled on floor. Spills were
>mopped, contaminating mop water. Mop water poured down floor drains/sinks
>which drain to cesspool. Effluent from septic tank/cesspool drained to
>drain field. Septic tank/cesspool was replaced by CPP Waste Treatment
>Plant. Unknowned if septic tank/cesspool and drainage field was decon'd.
>and removed.
>

>Other possible records that may have records of leaks, spills, and
>contamination, and that may still exist:

>

> Tank Farm Daily Data Sheets
> Supervisor's Daily Logs
> Personal Daily Logs
> Monthly Reports to DOE
>

>Monthly Reports summarized monthly activity at Tank Farm. If occurrence
>was reported reported in monthly report, it would have been previously
>entered in supervisor's and/or operator's daily log. But entries in daily
>logs may not have been reported in monthly reports.
>

>12/2/74 -- Staiger Personal Log entry: Loss of Chromated cooling water
>upstream of WRV-1.
>

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>

>Dan, please reply to this note if you have clarifications or recall
>additional information regarding our conversation or soil contamination
>incidents at INTEC Tank Farm.
>

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Ross E. Johnson, A.I.A. Architect
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hns@inel.gov (Ross Johnson) on 11/04/98 07:55:32 AM

To: MCALKD
cc: (bcc: K D Mcallister/MCALKD/LMITCO/INEEL/US)
Subject: Dan Staiger Interview, 8/12/98

Notes from interview on 8/12/98 with Frank Ward, ID=STAIGMD, regarding his recollection (and hearsay) of contamination releases since his employment, as follows:

Chromated water leakage continues to occur throughout the tank farm at joints and unions in steam piping, but are not reported at soil contamination incidents.

In early 70's, chromate leak adjacent to condenser pit -387 from buried valves.

Also in early 70's, chromate leaks from buried valves north of CPP-635.

Transfer line from WM-181 to WL-102 set in inverted U-shaped culvert w/ sand bottom leaked. Valve w/ teflon gasket failed through gasket. Gasket replaced. Unions in pipe joints leaked and were periodically tightened to stop leaks. Leaks contaminated soil. Leaking valve in manhole near WM-181 was replaced. Contaminated soil remained and not reported, except maybe in daily logs.

Exterior area NE of CPP-628 between -191 and -106 was used as area to decon contaminated backhoes, and trucks, & heavy equipment. Equipment was decon'd. by steam cleaning to remove contamination. Soil would have contamination from radionuclides and petroleum products. No reports recorded for soil contamination resulting from decon operations.

12- or 14-in. dia. service waste line on NW corner of CPP-604 was removed and replaced. Soil could have been contaminated from chromated waste and other chemical leakage as result of D&D.

Past employees (retired) who may have recollection of undocumented leakages, spills, and nonrad. contamination incidents, that would have been cleaned up/repared as normal work operations:

Pete Mickelsen
Moyland Young
G.E. Lohse

Septic Tank/Cesspool draining from CPP-604 possibly contaminated with mercury or petroleum oil from instruments. Mercury used to calibrate monometer instruments was occasionally spilled on floor. Spills were

mopped, contaminating mop water. Mop water poured down floor drains/sinks which drain to cesspool. Effluent from septic tank/cesspool drained to drain field. Septic tank/cesspool was replaced by CPP Waste Treatment Plant. Unknowned if septic tank/cesspool and drainage field was decon'd. and removed.

Other possible records that may have records of leaks, spills, and contamination, and that may still exist:

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- Supervisor's Daily Logs
- Personal Daily Logs
- Monthly Reports to DOE

Monthly Reports summarized monthly activity at Tank Farm. If occurrence was reported reported in monthly report, it would have been previously entered in supervisor's and/or operator's daily log. But entries in daily logs may not have been reported in monthly reports.

12/2/74 -- Staiger Personal Log entry: Loss of Chromated cooling water upstream of WRV-1.

Dan, please reply to this note if you have clarifications or recall additional information regarding our conversation or soil contamination incidents at INTEC Tank Farm.

To: TFF_OU-3-14_File
From: Ross Johnson <hns@inel.gov>
Subject: Dan Staiger Interview, 8/12/98
Cc: staigmd
Bcc:
X-Attachments:

Notes from interview on 8/12/98 with Frank Ward, ID=STAIGMD, regarding his recollection (and hearsay) of contamination releases since his employment, as follows:

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Past employees (retired) who may have recollection of undocumented leakages, spills, and nonrad. contamination incidents, that would have been cleaned up/repared as normal work operations:

Pete Mickelsen
Moyland Young
G.E. Lohse

Septic Tank/Cesspool draining from CPP-604 possibly contaminated with mercury or petroleum oil from instruments. Mercury used to calibrate monometer instruments was occasionally spilled on floor. Spills were mopped, contaminating mop water. Mop water poured down floor drains/sinks which drain to cesspool. Effluent from septic tank/cesspool drained to drain field. Septic tank/cesspool was replaced by CPP Waste Treatment Plant. Unknowned if septic tank/cesspool and drainage field was decon'd. and removed.

Other possible records that may have records of leaks, spills, and contamination, and that may still exist:

Tank Farm Daily Data Sheets
Supervisor's Daily Logs
Personal Daily Logs
Monthly Reports to DOE

Monthly Reports summarized monthly activity at Tank Farm. If occurrence was reported reported in monthly report, it would have been previously entered in supervisor's and/or operator's daily log. But entries in daily logs may not have been reported in monthly reports.

12/2/74 -- Staiger Personal Log entry: Loss of Chromated cooling water upstream of WRV-1.

Dan, please reply to this note if you have clarifications or recall additional information regarding our conversation or soil contamination incidents at INTEC Tank Farm.



hns@inel.gov (Ross Johnson) on 11/04/98 07:55:40 AM

To: MCALKD
cc: (bcc: K D Mcallister/MCALKD/LMITCO/INEEL/US)
Subject: Les Mitchell Interview, 8/17/98

Notes from interview on 8/17/98 with Les Mitchell, ID=LCM, from INTEC Quality Assurance regarding records and hearsay of contamination releases since his employment in the early 1970's, as follows:

I indicated that I was looking for soil contamination incidents in the Tank Farm that were not already well known or recorded as Environmental Control Area release sites. My task was part of a work package agreement in support of the scope of work for OU3-14 Tank Farm Remedial Investigation/Feasibility Study for Rene Rodriguiz.

Les indicated that a congressional subcommittee commissioned a couple of private firms, Radiological Assessment Corp. (from Idaho Falls) and S C & A, to do a similar search of records for hazardous releases at INTEC. Included in their search were searches for soil contamination sites.

S C & A did a release documents search which resulted in a database on CD-ROM. Eddy Chew from DOE-ID was the contact involved in that study and may have a copy of the CD-ROM.

Radiological Assessment Corp. (RAC) started their search approx. 2 yrs. ago and have another 2 yrs. to go. Marilyn Case (RAC) in Idaho Falls is looking into radiological release records. Pat McGavert (RAC) was looking into nonrad. release records; he is located in Boise. These people may have already found records that indicate releases.

Max Hales (proceeds Lohse) kept records of releases as one of his ongoing assignments at ICPP. Record Mgt. (and the records) went from Max Hales to:

Lohse, then to
Lynn Bernard (retired about 10 yrs. ago).

These files prior to 1972 were kept in their personal files. They may be microfilmed-- ask Frank Ward, he will know. Frank inherited Lohse's files.

Other who may know of contamination records are:

Dan Steiger
Pete Michelsen
Walt Michelsen

Also check with Health Physics. They retain permanent records of the the Health Physics Logs. The logs would indicate contamination releases.

<<<<<To Les Mitchell>>>>>: Please reply to this note with corrections, if your recall of our conversation is not as noted herein, or if you can recall additional information regarding contamination incidents and records at CPP Fank Farm.

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Appendix E-9
Lohse File Disposition

Lohse File Disposition



hns@inel.gov (Ross Johnson) on 11/04/98 07:55:50 AM

To: MCALKD
cc: (bcc: K D Mcallister/MCALKD/LMITCO/INEEL/US)
Subject: Lohse File Disposition

I checked with Frank Ward on 8/19/98 on the disposition of Lohse personal files as result of Les Mitchell interview who indicated that F. Ward would have those files.

Frank said when Lohse retired, his files were placed in boxes and the boxes placed outside his office for anyone to rummage for useful info. Frank retrieved info that was pertinent to his work--specifically, construction dwgs., drawing changes, and tank farm transfer flow records. Other records, such as letter files, memos, work orders, etc., that may have indicated minor leaks or soil contamination incidents were not kept.

I reviewed some of Frank's files for the type of files retained from Lohse's files. It appears that only construction dwg. prints, design changes, and flow records were retained.

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